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THE ROMAN OCCUPATION
OF SOUTH-WESTERN SCOTLAND



Photo, O. G. S. Crawford

DROVE FORD, WATER OF MILK, LOOKING NORTH-EAST

THE ROMAN OCCUPATION OF SOUTH-WESTERN SCOTLAND

BEING REPORTS OF EXCAVATIONS AND SURVEYS
CARRIED OUT UNDER THE AUSPICES OF
THE GLASGOW ARCHÆOLOGICAL SOCIETY

BY

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EDITED FOR THE SOCIETY
WITH AN HISTORICAL SURVEY

BY

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PREFACE

In February 1937 the Glasgow Archaeological Society, on the initiative of Mr. J. M. Davidson, appointed a Committee to organize a systematic investigation, by means of surveys and excavations, of Roman roads and forts in south-western Scotland. Professor J. D. Mackie, President of the Society at the time, actively associated himself with the scheme and obtained from the Carnegie Trust a guarantee of £100 against loss incurred in publishing the results, later replaced by a generous guarantee to the Society of £250. In meeting the cost of the investigation itself the Society was assisted by occasional grants from the Hunterian Museum of the University, where the objects recovered from the various sites have been deposited. In carrying out the scheme the Society enjoyed, through the friendly offices of Mr. R. C. Reid, the co-operation of the Dumfries and Galloway Natural History and Antiquarian Society.

As soon as the scheme was instituted, surveys of the area to be investigated were undertaken, and in July 1937, at Castledykes, a beginning was made with excavation. The progress of the work, until it was interrupted in 1939 by the outbreak of war, is displayed in the reports of Mr. John Clarke, Mr. J. M. Davidson, Miss Anne Robertson and Dr. J. K. St. Joseph, and is summarized in the final section.

The appearance of Dr. St. Joseph among the contributors was due to a fortunate coincidence. In September 1938 the Society became aware that, in preparation for a revised (third) edition of the Ordnance Survey Map of Roman Britain projected by Mr. O. G. S. Crawford, then Archaeological Officer of the Ordnance Survey, Dr. St. Joseph was engaged in surveys of roads and sites within the area marked out by the Society for its investigation. It was arranged that the results of these surveys should be published as part of this volume, the Society undertaking to defray the cost of trial trenches on selected sites.

The outbreak of war not only interrupted the investigation but held up the publication of what had already been ascertained ; and conditions

still postponed publication after the war was over. Meanwhile air-surveys which included the area investigated by the Society were made by Dr. St. Joseph in 1945 and 1946, and in 1946 there was a renewal of excavation. In July of that year Dr. St. Joseph examined a small earthwork at Barburgh Mill, in Nithsdale, revealed by the first of the two air-surveys, and in the following September he resumed excavation for the Society at Loudoun Hill, with Miss Robertson in charge of the small finds on behalf of the Hunterian Museum. In April Mr. Clarke continued at Milton his examination of an enclosure lying alongside the small earthwork which he had previously excavated, and soon found good reason to extend his exploration to the surrounding area, which was done in the following August. All this renewed activity resulted in discoveries of the first importance, but they came too late to find more than a brief mention in the reports contained in this volume.

The Society entrusted me with the editing of the reports for publication and with the writing of an historical survey correlating the results they present with the evidence previously available. In seeing the work through the press I enjoyed the constant help of Mr Davidson and, at a later stage, the active co-operation of his successor as President of the Society, Professor C. J. Mullo Weir. In the historical survey the fresh material provided by the contributors could not be related to the existing evidence without a good deal of discussion and some speculation, and it may be as well to explain here that they are not responsible for any opinions there put forward which are not to be found, expressed or implied, in their own contributions.

From the nature of the inquiries as well as their interruption by the war, some of the contributions are to be regarded as being, in varying degrees, interim reports, but the results secured were such that the topography and history of the Roman occupation of south-western Scotland, and indeed the history of the occupation of Scotland as a whole, began to assume a more complete and, in important respects, a new and more satisfying form.

Since 1946 our knowledge of Roman Scotland has been further extended by a rapid succession of discoveries, some of them of an unexpected kind, due to personal initiative and to excavations carried out under various auspices, and something must be said of those which most

concern the Historical Survey. This can be done now only by giving a brief summary here and linking it with the Historical Survey by cross-references

In 1949 Dr K. A. Steer detected in an air photograph the southern defences of a Roman fort at Whitemoss Farm, a mile north-west of Bishopston and about half a mile south of the Clyde. The results of some excavation there in 1950 are briefly reported, with a sketch-plan, by Mr. Frank Newall in the *Journal of Roman Studies*, XL (1950), p. 95. The pottery found was of Antonine date, but to the north-west of the Antonine fort part of a defensive system was traced running on a rather different alignment. If this was not laid out originally for a fortified annexe to the Antonine fort, 'it would seem there is more than one fort and more than one period'. If proof comes of a permanent Flavian fort on this site, it will be a valuable supplement to what we learn from the Avondale system (pp. 211-2) about the measures taken in the early occupation to secure the westward-projecting lands of the Clyde estuary. The Antonine fort, which seems to have occupied almost 5 acres, was clearly intended to prevent the outflanking of the Wall. We must acclaim so important an addition to our knowledge of the Wall-system, but the Wall-system lies outside the scope of this volume.

With the aid of a grant from the Hunterian Museum, Glasgow University, and with the assistance of members of the Civil Engineering Department of the University, Miss Robertson resumed excavation at Castle-dykes in 1950. Besides uncovering part of a large headquarters-building and proving the presence of men of the Second Legion on the site by the discovery of a building-slab with the sculptured figure of a capricorn, she found some additional evidence of a temporary structure (see pp. 209-10) preceding the permanent Flavian fort.

In 1949 Mr. R. W. Feachem discovered from photographs of the National Air Survey a Roman fort, with a large marching-camp adjoining it, near Oakwood, on the Ettrick Water, about $3\frac{1}{2}$ miles from Selkirk (for a sketch-plan see the *Journal of Roman Studies*, XL, 1950, p. 95, Fig. 15), and another on Broomholm Knowe, on the Esk, about 2 miles below Langholm. Neither of these sites lies within the area covered by this volume, but both concern us (cf. p. 210) in so far as the Broomholm fort confirms the existence of a road from the south-west to Newstead by

Eskdale (cf. *Proc. Soc. Ant. Scot.*, LXXX, 1948, pp 116-17, LXXXII, 1950, pp. 233-4), while that at Oakwood suggests communication between Milton and Newstead by way of the Moffat Water and the Ettrick Water. If the Oakwood fort is of the same period as the adjacent camp, which has internal and external *clavunculae*, it should be of Flavian origin, and it was in the Flavian period that Milton played an important part in the scheme of occupation.

At Milton Mr Clarke's recent excavations, besides throwing light on the adjustments of the road-system in the Flavian and Antonine periods of occupation, have unearthed a novelty in the form of a fortlet (see *Dumfriesshire and Galloway Transactions*, 3rd Ser, XXVI (1949), pp. 140-6) which, in the structural sequence, comes between the succession of Flavian forts (pp. 109-10, 205, 209) and the Antonine fortlet described in detail in this volume (pp 104-10). Fresh material also for the history of the Roman penetration of upper Annandale is beginning to take shape with his careful unravelling of a complexity of entrenchments (not all of them of a merely temporary kind) which he has now found to be earlier, in part at least, than any of the other structural remains hitherto encountered on the site.

In the course of an extensive air-reconnaissance of Roman Scotland in 1949, Dr. St. Joseph discovered a number of unrecorded Roman sites in the south-west, not only in Nithsdale but in Galloway, which has hitherto been devoid of Roman structural remains accepted as authentic. As announced in the Fifth Report of the Scottish Regional Group of the Council for British Archaeology, the Roman works discovered in Nithsdale were six temporary camps and, at Dalswinton, a large permanent fort; those in Galloway were a large permanent fort, with four or five temporary camps adjoining it, at Glenlochar, some 2 miles north-west of Castle Douglas, and a small fort as far west as Gatehouse of Fleet. The *Journal of Roman Studies* (XL, 1950, p. 92, n 5) promises to give us in its next volume an account by Dr. St. Joseph himself of these surprising discoveries. Meanwhile, as already announced, they invite one or two provisional inferences. The multiplication of temporary camps, especially the group of four or five adjoining the fort at Glenlochar, suggests a penetration of Nithsdale and Galloway in both the Flavian and Antonine periods, and a permanent Flavian occupation of Nithsdale is suggested.

by the large fort at Dalswinton, which is less than three miles distant from the Antonine cavalry-fort at Carzield and can hardly have been occupied at the same time. (See pp. 197, 221-2.)

The indebtedness of contributors to owners and tenants of ground on which permission was given to excavate is acknowledged at the appropriate places in the several reports. With these acknowledgments the Society gratefully associates itself, as also with those of a more personal kind which are made by the contributors in their reports or are here made on their behalf.

Dr. St. Joseph wishes to express his indebtedness to Mr. R. C. Reid, who greatly helped in obtaining permissions to excavate on the Dumfriesshire sites, to Miss I. H. K. Beattie and Mr. J. Robertson, who gave much of their spare time to assist with the surveying, and to Dr. W. Semple, who generously defrayed the cost of the work at Galloberry. In June 1939, when Mr. Crawford undertook his memorable 'Air Reconnaissance in Scotland' (*Antiquity*, XIII, 1939), with Mr. C. G. M. Alington as pilot, he generously placed the aeroplane at Dr. St. Joseph's disposal for two days. For Dr. St. Joseph's ground-surveys Mr. Crawford kindly permitted the loan from the Archaeology Office of the Ordnance Survey of the relevant 6-inch sheets with his manuscript notes. These Dr. St. Joseph checked upon the ground when he walked over the roads, and they have been freely drawn upon, especially for the accounts of the Durisdeer road and of the road from Biggar to the north-east. All the ground-photographs illustrating Dr. St. Joseph's road-surveys were taken by Mr. Crawford and are reproduced here by his permission. For the air-photographs and for permission to reproduce them Dr. St. Joseph is indebted to Mr. Alington. For both Dr. St. Joseph's and Mr. Davidson's road-maps, Ordnance Survey Maps have been used for the background with the sanction of the Controller of H.M. Stationery Office.

The air-photographs of the sites at Loudoun Hill and Bothwellhaugh were taken for Mr. Davidson by Wing-Commander (now Air Vice-Marshal) A. McGregor. At Bothwellhaugh Mr. Davidson received valuable assistance from Mr. J. S. Howarth in surveying the site and in preparing plans and sections, and considerable help was given in the work of excavation by Mr. James Murray, now of the Foreign Service, then a student of Glasgow University. To Miss Robertson Mr. Davidson is

indebted for help in the field as well as for the classification of the finds, and he desires also to make acknowledgment to many friends who gave unstintingly of their labour in furtherance of the work. In carrying out his road-survey he received much practical assistance from the late Mr. Alfred Miller and the late Mr. William Fletcher, and from Mr. James Barr, Messrs. J. & J. Blackwood, Mr. William Grossart, Mr. James Chalmers, Mr. Charles Taylor, Mr J G Scott, Mr. James Hamilton and Mr. C. R. H Bonn.

Mr. Clarke is indebted to Miss Robertson for assistance with the finds, and especially to those who helped with the field-work, notably his colleague Mr. W. A. Anderson, of Paisley Grammar School, and Mr. W. Murray, who, he feels, are equally responsible with himself for whatever success may have been achieved. Mr Clarke enjoyed the assistance of Mr. Anderson both at Durisdeer and for part of the time at Milton, while Mr. Murray was present almost throughout and brought with him a changing company of fellow-students of Glasgow University.

By associating these students with himself from the beginning of his excavations at Milton, Mr. Clarke gave a field training in the archaeology of the Roman period such as had not previously been given in Scotland. Since then, a Scottish Field School of Archaeology has been instituted under the auspices of the Scottish Universities and of the Scottish Regional Group of the Council for British Archaeology, with financial support from the Universities and from the Society of Antiquaries of Scotland. It has also received help in various forms from the Dumfriesshire and other County Councils. In the Transactions (1946-47) of the Dumfriesshire and Galloway Natural History and Antiquarian Society Mr. Clarke has explained that the credit for this development is due mainly to Mr. R. C. Reid, ex-President of that Society, and to Mr. Davidson, who is Chairman of the Committee in charge of the Field School. Its institution has already produced promising results. It ensured the continuity of the training which Mr. Clarke had been giving at Milton and enabled him to organize this, with notable success, upon a larger scale. A number of students also have taken part in the excavations at Bochastle, near Callander, by which Mr. W. A. Anderson, assisted by Mr. Charles Taylor, has added a new member to the known series of Agricolan outposts blocking the exits from the Highlands (p. 211), and in

Miss Robertson's excavations for the Hunterian Museum, both those on and near the threatened site of the Wall-fort at Duntocher, in which she obtained novel and notable results (see the *Journal of Roman Studies*, XL, 1950, p. 94), and her more recent excavations at Castledykes referred to above. Miss Robertson has also been using for instructional purposes the Roman Collection in the Hunterian Museum. It may be added that she has undertaken to continue the record of Roman coins found in Scotland which the late Sir George Macdonald published periodically in the *Proceedings of the Society of Antiquaries of Scotland*. The editor of this volume may be permitted to express here the gratification he feels, in his retirement from university teaching, that so much is being done to secure the immediate future of Romano-Scottish archaeology by Mr. Clarke and Miss Robertson, both of whom began their studies in that field in his class of Roman History in the University of Glasgow.

To the various acknowledgments already made in this Preface of help received from the University, notably through the Hunterian Museum, an acknowledgment must be added of the indebtedness of the Society for the inclusion of the volume in the series of University Publications. For helping to bring about this arrangement and for advising on some technical adjustments which it involved thanks are due to Professor Mullo Weir and Dr. W R Cunningham. At the end of 1950 the printing of the volume was taken over by the University Press (Messrs. Robert MacLehose & Co. Ltd.). To one of the Directors of the Press, Mr. John M. Jack, I am much indebted for valuable technical advice.

S. N. M.

NOTE

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I ROADS

FROM CARLISLE TO THE FORTH

BY J. K. ST. JOSEPH

FROM CARLISLE TO THE ANNAN

(For maps see Plates I, II, and III A-B.)

The second Iter of the British section of the *Antonine Itinerary* gives 12 Roman miles as the distance from Blatobulgium to Castra Exploratorum, with the same interval from there to Luguwallium; subsequent names in the Iter are those of forts south of Carlisle. The equation of Luguwallium with Carlisle means that the first two names must refer to forts north of Hadrian's Wall, for they are not included in the *Notitia* list *per lineam valli*. The intervals suggest that Castra Exploratorum is Netherby and Blatobulgium Birrens—identifications first proposed by Horsley.¹ It may be presumed that these forts lay on or near the main Roman road that extended northwards from Carlisle—a useful guide to its course, since little of the road itself now remains.

In the eighteenth century, it would appear, the road was still well preserved, for Horsley wrote that 'the Roman way from Middleby to Netherby, and from thence to Carlisle, is very certain':² but the descriptions of that period do not give much help in the determination of its exact line. They do, however, give two fixed points which indicate its general course. According to Maitland, 'the great Roman military way having left Cumberland in the north-western part of England, crosseth the rivulet Sark, and enters Scotland at the Barrow-slacks in the stewartry of Annandale'.³ This places its passage of the Border at Springfield, for this hamlet was built at Barrowslacks, as may be learned from Macfarlane.⁴ The other fixed point is near Longtown, where Roy

¹ *Brit Rom* (1732), pp. 114-5.

² *Ibid.* p. 409.

³ *Hist of Scotland* (1757), i, p. 191

⁴ *Geographical Collections*, i, *Publ Scottish History Soc*, li (1906), p. 383: 'Barrow-slacks half a mile to the eastward of the church of Graintney' (Gretna). The building of Springfield did not begin till 1791 and was still in progress when the *Statistical Account* (ix, p. 529) was written about 1793.

and Stuart agree in placing the crossing of the Esk. 'The second principal Roman way', Roy wrote, . . . 'crosses the Roman wall at Stanwix, near Carlisle; and leading by a place called Blackford, seems to have passed the Esk at or near Langtown Church. In the neighbourhood of this place a road has branched off to the right, leading towards Netherby; but the principal one, or that which is most conspicuous at present, points towards Gretnay.'¹ According to Stuart, 'from Stanwix the road proceeded to Longtown on the Esk, and from Longtown to Gretna—passing over the Solway moss, nearly on the track of the present high road between Carlisle and Lockerby.'² In the Middle Ages travellers preferred the fords of the Solway to the bogs between the Esk and the Annan,³ but a crossing somewhat below Longtown would enable the builders of the road to Springfield to take advantage of a ridge running south of the Solway Moss. A crossing about Longtown would bring the road to within some three miles of Netherby, and would thus explain why that station, situated on a branch road, is included with the main-road stations in the *Itinerary*.⁴ Upstream there is hardly another convenient crossing under natural conditions for some miles. On the other hand, a crossing practicable in all (or most) weathers would hardly be found much below Longtown, where the Esk traverses a wide alluvial plain liable to extensive flooding.⁵ With these two fixed points as a guide—the one about Longtown, and the other at Springfield—the line which they indicate was surveyed both from the air and on the ground for surviving traces of the road.

The road probably crossed the line of Hadrian's Wall near the site of the fort at Stanwix. If the traditional course⁶ is correct, it ran

¹ *Militi Ant.*, p 104. The account of Chalmers, *Caledonia*, 1 (1807), p 133, is based on Roy and Maitland

² *Caled Rom* (1845), p 255

³ *Scottish Hist. Rev.*, xviii, 1921, p 80, n. 3.

⁴ In *Itineraries* based upon maps the insertion between two main-road stations of an adjacent station on a branch road is found occasionally as a method of indicating the approximate point of divergence of the branch road

⁵ In the eighteenth century the main road from Carlisle to Annandale went by Longtown, the present road dating only from about 1812 (W Crawford, *Map of Dumfriesshire from an Actual Survey*, 1812)

⁶ This is adopted in the 1926 edition of the large-scale Ordnance sheets, and marked as 'course of Roman road'

slightly west of north across the housing estate that now spreads over Knowefield Nurseries. At the north end of the last field but one (C. xvi, 15, 783)¹ before the Gosling Sike is reached, a faint hump about 100 yards east of the main road may mark the line. A careful watch on the builder's trenches seems to be the last chance of obtaining more information. No trace appears in the meadows hereabouts either on the ground or from the air. 300 yards ahead a straight length of parish boundary considered to indicate the course of the road begins at a bend in the sike and continues north for two miles, mostly marked by hedge-lines. In the south corner of the first field north of the Gosling Sike (ibid. 773) a mound, with a hollow on the east side of it, occurs on the plotted line. The ground rises to the north until California Lane (ibid. 208) is reached, where the 'causewayed' appearance of the cinder track is seemingly quite modern. No remains are visible past Newfieldhead and Houghton Cottage. The ground rises gently to Harker Grange, a most suitable site for a signal station, for the extensive view includes Stanwix to the south and northwards the high ridge of Arthuret Knowes by the Esk, four miles ahead. No traces are to be seen in the field (C. xvi, 11, 49) north of Harker Grange, but on the east side of a copse, ibid. 48, there is a low, broad mound with large stones in it. 200 yards further on, towards the north end of the next plantation (C. xvi, 7, 711), a bank some 14 feet wide seems to represent rather more than the old field-dyke along this line. There is a very slight hump in the centre of the next field (ibid. 709/209) on the line of the parish boundary. The lane from Harker to Houghton House Plantation is then crossed, and at the north-west corner of the first arable field (ibid. 707/207) a dark line was visible in the corn in June 1939, a crop-mark that perhaps indicates one of the side-ditches of the road. No remains occur in the next three or four fields south of Blackford Bridge, the point of convergence of the parish boundary and the modern road. Northward to the Esk the course of the road is unknown, unless it be represented by the main road as far as the river Lyne, some two miles ahead; nor are there any definite traces

¹ For the method of reference see 'Ordnance Maps' in the Bibliography (p. 193). For Cumberland, the sheets of the 2nd edition (1901) of the 25-inch Ordnance Map have been used. In the 1926 edition, which is not yet complete, the field numbers have been altered.

of the branch to Netherby fort. The position of the Esk-crossing can thus hardly be fixed with certainty, but an approximation may be made by prolonging eastwards the course of the road from the further side of the river. This line intersects the Esk at the shallows known as the Roost (C. x, 10, 1293), the site of a former ford, upon which many old tracks converge, as is clearly seen from the air. 1400 yards north of the Roost the prominent glacial ridge of Arthuret Knowes rises from the edge of the flood-plain of the river to above 100 feet O.D., and affords by far the best view in the neighbourhood. So ideal a site for signalling would hardly pass unnoticed by military road-surveyors, but the small square earthwork on the west end of the ridge, south of the church, is certainly not Roman in character.¹

For a mile west of the Esk the assumed line crosses a river-terrace, probably above natural flood-level. Traces are now sought in vain here amongst the ruins of the old Gretna munitions-works. At the light-railway by Blackbank a lane which suggests the Roman line leads to the ridge-top south of Solway Moss. After 300 yards the lane bends sharply to the right, but the Roman road continues straight on, and now lies just within the north boundary of Millhill Wood (C. x, 5, 162) ; when the undergrowth permits, the cambered road-mound may be seen occasionally, covered by peaty soil. There is a change of direction to the north at the lane from Millhill to Gretna station, the Roman road descending from the ridge to the river Sark ; it enters the corner of the field C. x, 5, 130, coincides for 50 yards with the hedge-line between the two fields *ibid.* 130 and 129, and then crosses an arable field (*ibid.* 119) very obliquely, reaching the main road 500 yards from the last change of direction. Both in the last arable field and in the pastures beside the Sark (C. ix A, 8, 120 and 99 ; D. lxiv, 2, 225) the Roman road was seen from the air, in June 1939, clearly marked by a belt of parched grass.

Dumfriesshire is entered at the river Sark and from here to Birrens the Roman road was visible in the eighteenth century, as Roy records : ' From this place [Gretna], for many miles together, the vestiges of it are distinctly to be seen, leading through the procestrium of the station

¹ For plan see *Cumb. and Westmorland Trans.*, 2nd ser., viii, 1908, p. 245. The earthwork has sharp corners, and originally measured about 40 feet square. The west half has now (1939) been destroyed by a sandpit.

at Birrens, near Middleby.¹ For some miles the main road to Kirkpatrick is said to mark the general line of its Roman predecessor: At the river Sark half a mile east from the church of Graitney begins a highway called the barrowgate all cassowed supposed to be a Roman way, which highway being at a little distance north from the church of Graitney runs a mile west, where the parish terminates and runs many miles into Scotland and is the road to Edinburgh and Glasgow.² The 'old road' marked on the Ordnance Map³ between Kirkpatrick and Merkland is, as its present appearance shows, only an old turnpike, though it may preserve the Roman line. Between Merkland and Birrens no remains of the road are known, and certainly no part of the existing road-system here represents a Roman alinement; but the prolongation of the straight course from Newton would lead almost directly to the fort. Roy planned a 'Roman way' for a mile south-east of Birrens which left Broadlee on the east, and this view deserves attention in the light of his statement that vestiges of the road were distinctly to be seen.⁴ His view is illustrated on his Plates xxiv and xxv, which show the road passing the fort on the west through what might appear to be an annexe. Air-photography, besides amplifying his plan of the entrenchments in a way hardly possible by ground-survey (Plate XXXIV; see p. 96), has fully confirmed his observation of the road. In June 1939 the track of what was apparently the road was visible from the air across the arable field (D. lviii, 1, 1447) west of the fort, and in the same line through the field (ibid. 1444) north of the lane from Birrens Lodge to Middlewhats. There it is parallel to the hedge on the west side of the field and at some 40 yards distance.

¹ *Milit Ant*, p. 104

² Macfarlane, *Geographical Collections*, 1 (1748), pp. 386-7. Cf. *New Stat Account*, iv, p. 266, Gretna parish (1834): 'Camp-house, on the Glasgow road, which is supposed to pursue the track of the old Roman one leading to Middlebie and Birrenswark in all likelihood indicates the site of one of a strong chain of fortifications'; cf. Stuart, *Caled. Rom*, p. 255. The *N S A*, ibid., adds 'A square camp of large dimensions may also be easily traced on the farm of Raeburnfoot'. No signs of this were seen from the air during a careful search of the area (1-inch Ordnance Map of Scotland, sheet 89, square F 6).

³ D. lviii, SE

⁴ *Milit Ant*, p. 104 and Pls. xxiv-xxv, whence Stuart, *Caled. Rom*, pp. 123, 255, Pl. 1. Roy's 'Broadlee' is not the present farm of that name.

It may be presumed that the road continued on this line past the farm of Land and ascended Middlebie Hill.¹ No remains are visible here for $1\frac{1}{4}$ miles, nor indeed until the next stream, West Gill, is passed; extensive ploughing has apparently destroyed all traces. The prominent grassy hump (field D. li, 16, 957/954) on the east bank of West Gill marks the site of Old Hall Farm, where large stones of the foundations are visible in the grass. Signs of the road are now sought in vain on the steep valley-sides, 50-foot slopes where the gradient was possibly eased by embankments. Beyond West Gill the 'old road' plotted on the Ordnance Map probably marks the Roman line here as it certainly does further north-west. The road crosses the large meadow (D. li, 16, 58) at the top of the slope and enters the next field (*ibid.* 59) at the gate in the fence between the two. The prolongation of this line southwards passes through Birrens, a fact lending support to the view that the Roman road took a direct course over Middlebie Hill.

For the first 30 yards beyond the gate occasional cobbles are seen amongst the turf, and a faint mound is visible a little further on, crossing the field on the Ordnance line. In 1924 road-bottoming was exposed for a width of three paces in a newly cut drain on the north side of this field. The lane to Relief Cottages is now crossed; there are no traces in the bull-close (D. li, 12, 44) next the farm, nor in the large field *ibid.* 42. The Roman road is converging with the modern road to Burnswark, and the two meet where the latter bends to the west 370 yards north of Haregills Cottage. In the last field (*ibid.* 28) before they join, the course of the Roman causeway is certain, although nothing is now visible, for Mr. O. G. S. Crawford observed in 1924 that new drains revealed road-metalling along the plotted line; stones of different sizes were found packed together, whereas ditches elsewhere in the field exposed only a few stray boulders.

The road has climbed 350 feet in the last mile from West Gill. A little further on, near the top of the ascent, it inclines to the left to take advantage of the hollow between Burnswark Hill and Haregills, and as soon as a wide view to the north is obtained swings into a new line aiming at the next ridge-top $1\frac{1}{2}$ miles away—a typical example of Roman engineering. Burnswark Hill is such an exceptional view-point that it

¹ As shown on Roy's map, *Milit. Ant.*, Pl xxxv.

was probably included in the long-distance signalling-system organized along the road. While Birrens fort is hidden by Middlebie Hill from all points on the road further north, the top of Burnswark commands a wide view to the north, as well as a view southwards so extensive that signals would be visible on a clear day to forts across the Solway.

At a gate 65 yards south-east of the 714 Ordnance height the modern lane leaves the Roman line, which inclines to the left, it has served as a field-road at no very distant date, yet the hump of the causeway, 7 or 8 paces wide, is still prominent for some distance. A wall follows its south edge. 45 yards from the gate the slope is broken by some digging for gravel or road-metal. Opposite Burnswark Cottage little or nothing that is Roman remains. Beyond the gate at B.M. 710.9 the field-path very gradually leaves the Roman line, which passes to the north under the wall¹ round an old plantation (D. li, 12, 69). For a few yards at the south-west corner of the plantation, the road lies wholly north of the wall. Here, and for 40 yards beyond the plantation, the causeway is very well preserved; the width is 9 paces—a dimension that probably includes the 'spread' into the ditches on either side. Both ditches are visible, that on the north rush-grown and very distinct. For the next 50 yards there is a slight cutting for the road on the north side to maintain a more level surface. 70 yards from the plantation the road makes an angular turn of 30 degrees to the north, and aims at Courstein ridge. For the next half-mile the causeway is well preserved, though often sunk in boggy ground. Under suitable conditions it can be followed on foot down a rough pasture (D. li, 11, 545) without much difficulty, in spite of the old field-dykes and long grass and reeds that occasionally obscure the line. For some 400 yards large stones which are plainly part of the causeway appear here and there amongst the turf. This sector was clearly visible from an aeroplane in June 1939 as a long belt of parched grass. An approximation to a bird's-eye view may be obtained from the south end of Burnswark Hill.

About 25 yards of the Roman causeway remain on either side of Gimmenbie Burn. On the south bank, the side ditches are enlarged into hollow tracks, while on the north the causeway ascends the bank in a slight cutting in the corner of field D. li, 11, 543, and extends into

¹ In 1939 this wall was in course of removal to provide road-metal

the meadow beyond (ibid. 544), where the measurement between the ditch-centres is 8 paces. The road is visible across the rest of this meadow as a very low, faint mound. The point where it reaches the fence affords a good view southwards of the descent from the Burnswark ridge. The mound is now very clear for 90 yards through the corner of an arable field (D. li, 7, 550) and into the adjoining meadow (ibid. 552), which it enters 40 yards west of the fence-junction. For the remainder of this field and through the next two there is little or no trace, but the gate between fields 534 and 532 is exactly on the line. Beyond the old grass-track to Mosshead the ground rises, and the road is visible for 200 yards as a slight shelf some 22 feet wide, ascending the hill obliquely.¹ A few quarry-pits occur to south of the road near the obtuse angle of a plantation. The road-mound appears intermittently in a straight line towards the top of the hill, and at the summit a circular, flat-topped mound, some 2 feet high and about 8 paces in diameter, lies astride the east half of the causeway. This is perhaps a signalling-platform like those at Fourlaws, beside Dere Street, which it somewhat resembles.² To the south-east the road is in view as far back as Burnswark, to the north-west the ridge east of Lockerbie forms the horizon. The road is seen again for a short distance at the north end of the same field; some modern digging occurs close beside it on the west. Dr. James Macdonald described a road-section hereabouts which exposed 18 feet of metalling with a camber of 6 inches; both kerbs and side-ditches were absent.³

The descent to the Milk Water begins across the next two fields (ibid. 507 and 508), and Courstein farm is passed. A continuation of the line intersects the grass-lane 350 yards north by west of the farmhouse. Beyond the gate where the lane enters field 330, the steep slope down to the stream is reached. No traces remain in this field, but the road

¹ D li, 7, 530 This length and the well preserved sector near Burnswark probably inspired the description in the *New Stat Account*, iv, p. 197, Tundergarth Parish (1834), of 'a Roman road, discovered a few years ago on the north side [of the parish], and passing from the Roman camp on Burnswark hill, in a direction north-west. Traces of it have been found from thence to Closeburn.'

² A few large, irregular stones are visible in the side of the mound; there is no ditch. For the comparison with Fourlaws I am indebted to Mr I. A. Richmond. See *Northumberland County History*, xv (1940), pp. 101-2

³ See *Proc Soc Ant Scot*, xxviii, 1894, p. 309.

probably descended the whole of the slope on a graded shelf in continuation of that still present between Upper Westwood and the stream at Drove Ford (Frontispiece). To assume this new direction the road must have inclined to the north in field 575, shortly after it crossed the grass-lane.

For four miles from Drove Ford to beyond Dryfeholm farm, north-west of Lockerbie, the course of the road is uncertain. Two possible lines merit consideration. From Drove Ford the road might be supposed to have continued north for a mile towards Quhytewollen Hill. South-east of the summit a turn to the west would take the course along Quhytewollen Plantation and past Cudscroft and Kirkburn to the lane leading from the main road to Torwood Ford and Gallaberry Hill, to join the known length by Broomhills. One mile of this course, from Quhytewollen Hass to the north end of Torwood Plantation, is marked as a Roman road in the first edition of the large-scale Ordnance Maps.¹ This is certainly the line of an old road, for across the two fields D. xliii, 13, 369 and 377, a causeway is evident, though its present width of 3 paces is too narrow by Roman standards. This is the route suggested by Maitland and Roy, the latter of whom describes it as 'leaving Birrensworck-hill on the right, and thence proceeding to the river Milk, which it seems to have passed at the Drove-ford between Scroggs and Milk bridge : then leaving Mall's castle, Lockerby, and Agricola's camp, on Torwood moor, all on the left, it has passed the river Dryffe, below Dryffesdale Church,² not far from the junction of this river with the Annan.'³ The value of Roy's account, however, is lessened by the inaccuracy of his map in the neighbourhood of Lockerbie. It places the ford of the Milk Water south of Dickstown (the modern Dixons) and Milluntea (Mellantæ), whereas Drove Ford lies to the north of both these farms, and on Torwood Moor the relative positions of the three earthworks there⁴ are considerably in error.⁵

¹ D. xliii, SW, edition of 1862. See also J. Macdonald, *loc. cit.*, p. 310

² This stood near Dryfe bridge. The site is marked on the 6-inch Ordnance Map, sheet D. xliii, SW

³ *Milit. Ant.*, p. 104. Cf. Maitland, *Hist. of Scotland*, i, p. 193. 'The military way from Burnsworck, proceeding in its northern course, leaves the town of Lockerby on the west'. Chalmers, *Caledonia*, i, p. 133, has copied Roy's account with slight verbal rewording.

⁴ Fairholm fortlet, Torwood camp, and the 'fort' at Dryfesdale Gate

⁵ *Milit. Ant.*, Pl. xxv.

The alternative is to suppose a change of direction to the west at Drove Ford which would bring the road across the south shoulder of Lockerbie Hill and through Lockerbie Burgh to coincide with the road from Beckton to Dryfesdale Gate. A sharp bend to the north at the Dryfe crossing would bring the road into line with the Broomhills sector. It was some such course as this that was in the mind of the writer of the old *Statistical Account* of Dry'sdale parish: 'There are plain traces of a great Roman road, from . . . Burnswark, thence crossing this parish at Lockerbie to Dry'sdale Gate and up to the Gallaberry, where it divided, one branch leading up through Annandale.'¹ During a survey in 1939 no signs of the Roman causeway were observed on either line such as to permit of a choice being made between the two,² but the second alternative seems preferable, for the route it supposes would take advantage of the high ground at Dryfeholm at which the Lochmaben branch is aiming (see pp. 44-5), it would involve a shorter crossing of the river-flats at Dryfesdale Gate and would pass close to Torwood camp and Fairholm. All the other known camps and forts both on this route and on Dere Street are close beside the road, and there is no reason to suppose that these two would be exceptions. On either view the road would cross the ridge at Dryfeholm, which rises like an island from the flood-plain of Dryfe and Annan, a most suitable position for a fort³ controlling the river-crossing.

THROUGH ANNANDALE

(For maps see Plates III C-D, IV, and V A-D.)

On leaving the Dryfeholm ridge at its north end, near Springfield, the Roman road aims a little west of north. No traces are visible on the low ground in the first two fields (D. xlii, 12, 420 and 950), but a very faint mound crosses the west corner of the third (ibid. 952). In

¹ *Stat Account*, ix, p. 426, Dry'sdale Parish (1793) This is repeated almost verbatim in the *New Stat Account*, iv (1836), p. 454

² A causeway along the east side of field D xlii, 13, 495, north-west of Dryfesdale Gate, is worth further examination. It extends for 200 yards, passing at its north end under a beech-tree in the hedge, 14 yards west of the road

³ Published accounts of a 'Roman fort' hereabouts refer to the native work at Gallaberry (D xlii, 16, 422/503). Cf., for example, *Stat Account*, ix, p. 425: 'a Roman fort, . . . situated upon a large eminence, in the centre of the united and extensive holms of Dryfe and Annan, called the Gallaberry'

the field 918, north of the road from Albie Hill to Muirhousehead, there are no signs, but at the far hedge-line a gritty belt begins which almost certainly marks the road ; it extends across the corner of the next field (*ibid.* 917) and for some yards beyond. For the next 300 yards, as far as the hillock on which Broomhills farmhouse¹ is built, the ground is wet or marshy. North of the farm the causeway was visible in 1924 nearly to Nethercleuch Burn, showing for 150 yards in field 889 as a belt of grass among the rushes. No further traces are seen across the marshy ground until the lane from Millhouse to Brieryhill is reached, 500 yards to the north. There the south end of the east boundary-dyke of Annan-hill plantation (D. xli, 8, 869) is set on a great bank which lies mostly within the wood and seems to be remains of the Roman causeway. Northwards the line diverges slightly to the east of the plantation, exactly as shown on the Ordnance Map, and is then parallel to the dyke at 20 yards distance, where it shows quite plainly as a stony ridge. The road here is running along the east slope of Annan Hill, the summit of which commands a wide view. It may be observed that this is the only position close to the road from which both Fairholm and Dalmakethar are visible, a fact which would make this a key-site in any organized signalling-system which included these positions.

There are no signs of the road in the two fields D. xli, 8, 841 and 837, but stones which may be remains of the causeway are exposed in the track to Fourmerklandhill, 20 yards east of the point where a hedge runs up to the track from the south. Across the next two fields (*ibid.* 350 and 349) the Roman road remains as a slight mound forming a stony belt where it has been disturbed by the plough. Under suitable conditions the course is plain as a belt of light soil, and it was clearly seen from the air in June 1939 as a crop-mark. It is in line with the drive to Jardine Hall Mains, beneath which it passes to reappear beyond the farm in field D. xlii, 4, 318, where again a crop-mark was visible in the corn in 1939. A certain stoniness may still be noticed on the ground beside the modern footpath² The ground falls towards Dinwoodiegreen

¹ From here the line northwards is marked as 'Old Road' on the Ordnance Maps D. xli, SE and NE

² The course is drawn about 12 yards too far east on the Ordnance sheet D. xli, NE It should continue in the line of the drive to Jardine Hall Mains

Burn. For the last $2\frac{1}{2}$ miles the road has followed a straight line from Dryfeholm ; it now bends to the east on a course no longer apparent to coincide with the high-road from Lockerbie to Moffat. Search in the wood *ibid.* 305, where a light railway (now disused) to Corncockle Quarry and an old drive to Jardine Hall are passed, revealed no vestige of the road, nor are there any clear traces in the next two fields (*ibid.* 287 and 267), which have at one time been heavily ploughed. If the Ordnance Map is correct, the road curved across these two fields to join the line of the high-road at Dinwoodiegreen.

Maitland describes 'the military way from Burnswark' as 'falling into the road to Moffat.'¹ This road was replaced about 1780 by the turnpike.² These roads, and their modern successor, have obliterated the Roman structure, but they have preserved its line³ for the $1\frac{1}{2}$ miles from Dinwoodiegreen to Dinwoodie Lodge, following a course which keeps just above the river-flats in a manner characteristic of sectors of the Roman road elsewhere.⁴

From Dinwoodie Lodge the road follows the ridge-top, making for Watch Hill. The Ordnance line may well be approximately correct, but nothing is now visible in the first two fields. The mound reappears 200 yards beyond the summit (D. xxxiii, 12, 60) and can be traced towards Dalmakethar Burn ; a hollow leading down the slope towards the burn may be a Roman cutting. Here there is a change of direction of 15 degrees to the east, as marked on the Ordnance Map.⁵ The causeway

¹ *Hist of Scotland*, i, p. 193.

² *Stat Account*, viii, p. 309, Applegarth Parish (1793) : 'The great turn-pike road from Carlisle to Glasgow . . . was made about 15 years ago' Other references in the *Stat Account* confirm 1780 as the approximate date at which the turnpike was constructed through Annandale. The main road by Johnstonebridge had not been laid out by 1812, when Crawford's *Map of Dumfriesshire* was published.

³ Cf Chalmers, *Caledonia*, i, p. 134, and *New Stat Account*, iv (1834), p. 184 : 'A Roman road also traversed the parish [Applegarth] in a northerly direction, it may be traced in some places for several hundred yards above the level of the adjoining ground . . . It appears to have led from a strong station, in the farm of Dryfeholm . . . towards Moffat'

⁴ *E.g.* that between Rowantree Pool and the Midlock Water on the right bank of the Clyde.

⁵ On the 1-inch Ordnance Map (sheet 84, square H14) the lane that extends north from Dinwoodie Lodge is erroneously marked as a Roman road.

is plain north of the burn where it crosses the arable field *ibid.* 35, keeping 55 yards west of the hedge. Under good conditions this length can also be seen from the north slope of Watch Hill as a soil-mark lighter than the rest of the surface. Half a furlong east of Dalmakethar Smithy a lane is reached, and in the next pasture (*ibid.* 25) the track is lost; this ground has formerly been under plough. At the gate in the wall on the north side of the field a bare patch of earth exposes a suspicious amount of stone, and beyond the gate a causeway reappears and continues very plain for half a mile across two large pasture-fields (*D.* xxxiii, 12, 14, and 8, 11). 150 yards beyond the gate there is a change of direction of a few degrees to the east; some rounded hollows occur on the left at 15 yards distance which may be filled-in quarry-pits. 30 yards ahead slight depressions probably mark the two side-ditches; they would give a road-width of about 20 feet. The mound is very distinct; it is best viewed from some 30 yards distance on the west. 90 yards further on, the road gains the ridge-top, and runs along the curving crest of Dinwoodie Hill. A trench dug here in August 1939 disclosed a 15-foot width of heavy metalling

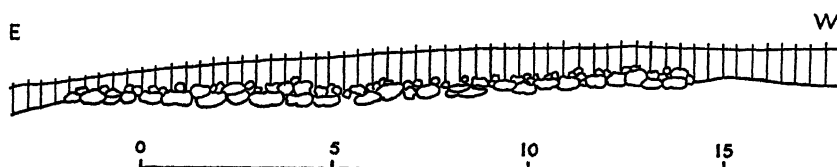


FIG 1 CROSS-SECTION OF ROMAN ROAD SOUTH OF DALMAKETHAR

which had been laid directly on the natural surface (Fig. 1); no kerbstones had survived the ploughing, nor were there any traces of side-ditches. At the fence between the two fields the east post of the gate appears to stand in the centre of the causeway. A bend through a few degrees to the west brings the road parallel to its former course, but some 320 yards ahead there is another bend in the opposite direction—a good illustration of the Roman practice of point-to-point alinement even within a short sector. The road-mound, here 19 feet wide, gradually

leaves the ridge-crest and passes to the east of Dalmakethar earthwork at 23 yards distance from the south-east angle of the rampart. Here the metalling consists of small stones packed together (Plate XXXVIII). The road descends the hill-side obliquely and becomes less distinct, but 40 yards before the field-wall that forms the boundary of Wamphray parish a mound appears 54 yards west of the modern road to Newton. The next field (*ibid.* 7) has been extensively ploughed and little is visible, but the top of an old gravel-pit extends across the line, exposing below the turf large stones which may be part of the road-bottoming. Near the field-gate a bend of the road to Newton brings it into the Roman line.

For 5½ miles from Dalmakethar to the fortlet at Tassiesholm (Milton) little or nothing of the Roman causeway remains. A reason for its disappearance is suggested by Martland. 'A little farther on [i.e. north of Dinwoodie] it disappears again; for the river Annan, having altered its course, has washed it away for a considerable space.' He adds that 'reappearing soon after, it becomes the common road to Moffat.'¹ It must have crossed the Annan about midway between Dalmakethar and Tassiesholm; according to Roy it 'continues along the east side of the Annan, by another small redoubt [Dalmakethar], and then passes that river near the Burnfoot of Kirkpatrick.'² Little is added by Chalmers's description: 'The Roman road now pursued its course along the east side of Annandale by Dinwoody Green, and a small post, at Girthhead [Dalmakethar], to Wamphray-water, which having crossed, it pushed forward along the east side of the Annan, by another small redoubt, and then passed that river near the Burnfoot of Kirkpatrick . . . leading by the entrenchments at Tassie-holm.'³ The *New Statistical Account* of Wamphray is probably the authority for the 'old road' of the Ordnance Map through Newton and Broomhills.⁴

¹ *Hist of Scotland*, 1, p 193.

² *Milit Ant*, p. 104

³ *Caledonia*, 1, pp. 133-4.

⁴ *New Stat Account*, iv (1834), p 142. 'There appears to have been a Roman road for four or five miles through this parish, from north to south, near the old road from Glasgow to Carlisle, which is still a turnpike road' Cf. the 6-inch Ordnance Map, sheets D xxxiii, NE and xxxiv, SE See also J. Macdonald, *Proc Soc Ant. Scot.*, xxviii, 1894, p. 312

Owing to the vagueness of these descriptions and the lack of surviving remains, the line of the road cannot be laid down in detail with any certainty. From the turn at Dalmakethar the Roman road probably continued straight to the corner south of Bield Cottage (D. xxxiii, NE.), and then swung to the left to the north end of Rammel Hill, the modern lane representing its line. This course, planned in two straight sectors, would keep the road on high ground above flood-level and avoid the sharp bend in the Annan at Scarhead Bank. For $1\frac{1}{2}$ miles northwards, from Newton to Coomb Burn, the fields are low-lying pastures interrupted only by isolated sand-hillocks. This may be the sector that Maitland considered to have been destroyed by the river, for the Wamphray Water now runs in an artificial channel across the alluvial flats, while it is not impossible that the Annan once passed the hillocks on the opposite side to its present course. The straight road through Newton,¹ which is the old turnpike, probably indicates no more than the general direction of the Roman road, and it is difficult to determine the exact point at which it crossed the Annan. Even the position of Roy's 'Burnfoot of Kirkpatrick' is now uncertain.

The crossing of so large a river would probably be guarded by a fortlet, as was the case elsewhere on this road. Dalmakethar and Tassiesholm are rather far away to have served the purpose. Nor are these two positions within sight of one another; the direct view necessary for signalling is prevented by the east shoulder of Cogrie Moor and the slope west of Orchard farm (D. xxiv, SE.). The flat summit of Nancy's Hill (D. xxiv, 16, 270) and the ridge north of Cogrie (ibid. 12, 1050) are the most suitable places; and the second is within view of both the earthworks. No remains, however, are now visible at either locality, nor are there any signs of the 'Roman camp' at Darnholmshaw mentioned by Maitland, according to whom the road 'in the neighbourhood of Darnhamshaw passeth on the eastern side of a considerable Roman camp, fortified on the eastern side by a rampart and a morass, on the northern and

¹ Originally this ran straight from field D xxxiii, 4, 196, near the manse, to Darnholmshaw Knowe (D. xxiv, 12, 278). The kink at Willows Burn is a modern diversion made at the construction of the railway. The old course is plain in field D. xxiv, 16, 258, as a broad stony mound.

southern sides by a marsh, and without doubt a rampart, and on the west by a high rampart and ditch.¹

The further course is thus described in the old *Statistical Account* of the Parish of Kirkpatrick Juxta: 'There is a Roman Road yet to be traced, running through the parish from south to north. It comes up the east bank of the Annan, from the ruins of a large camp at Burnswork in the parish of Middlebie, and passes here a place called Tatiusholm, where there are some remains of a square encampment of small extent.'² No traces are to be found along the line of the 'Old Road' marked on the Ordnance Map (D. xxiv, NE.) as running past Tassiesholm, over 1½ miles ahead, from a point on the lane to Nether Murthat about 180 yards east of the railway. On the other side of the railway, however, the lane is crossed by a causeway noted by Mr. Crawford in 1924. South of the lane this is well preserved as a grassy ridge 100 yards from the railway fence on either side of the wall at the north edge of the pasture D. xxiv, 12, 1046, and continues as a stony mound across the next field (*ibid.* 8, 1039), where it contrasts with the black, peaty soil. Here it is aiming at a gate on the lane, at the west end of the bridge-ramp. Beyond the lane a stony, light-coloured belt, crossing the next two arable fields (*ibid.* 1017) on the line of a modern cart-track, leads to the north-east corner of the second field, where it is lost beneath the railway embankment. Possibly this is the Roman road, but nothing further is visible past Mid Murthat and Milton.

A faint mound passes Tassiesholm (Milton) fortlet (D. xxiv, 3, 598) at 130 yards distance on the east,³ some 50 yards east of the parallel position marked on the Ordnance Map. The line aims at a large tree-stump in the hedge, and continues as a fairly clear stony track across the next arable field (*ibid.* 599), beyond which the shelf formed by the road is visible on the slope in the plantation (*ibid.* 600). Thereafter the causeway becomes very plain for 200 yards through two fields (550 and 549) and into a third (D. xvi, 15, 491), where it is still some 35 yards east

¹ *Hist. of Scotland*, i, p. 193. Darnham-shaw is the modern Darnholmshaw, north of Broomhills. Cf. the 'other small redoubt' of Chalmers, *Caledonia*, i, p. 134 (quoted above). The 'fort' in field D. xxiv, 12, 1055, is not Roman.

² *Stat. Account*, iv, p. 522, Kirkpatrick Juxta Parish (1793)

³ Contrast Roy, *Milit. Ant.*, Pl. viii.

of the Ordnance line. In this field ploughing in the spring of 1939 exposed a belt of large river-pebbles which marked its course as passing a little west of a narrow spinney on the old river-scarp. Nothing is visible down the small slope, nor in the corner of field 489. A house built some years ago beside the lane to Holms farm stands on the line. Through the next two fields (*ibid.* 486 and 483) the Ordnance course is probably correct, in the second the meandering of the Evan Water has swept away all traces. The river is crossed at Johnstone Ford,¹ 25 yards downstream from the site of Holms bridge. A mound, which may represent the causeway, is visible in the south-west corner of field 481, immediately north of the training bank. To the east of the road here air observation in 1945 and 1946 revealed part of the outline of a marching-camp (p. 111). There are no traces through four or five fields until the slight rise to the terrace on which Lochhouse Tower is built. In the north half of the field (D. xvi, 11, 250) east of the Tower a plain, stony ridge marks the course of the causeway, which crosses the high-road to Moffat at the 350-feet Ordnance height. For the last $1\frac{1}{2}$ miles from Tassiesholm the course has been practically straight, but the road now makes a slight bend to the west, and the ascent of Coats Hill begins.

ACROSS THE WATERSHED FROM ANNAN TO CLYDE

(For maps see Plates V D-E, VIII, and IX.)

At Coats Hill the road forsakes the valley and enters the wild country between the river-systems of Annan and Clyde. The course runs through hilly moorland for twelve miles, seven of which are above 1000 feet, and this deliberate choice of an upland route seems to have been determined by the narrowness of the valley of the Evan Water, the only considerable stream to connect Annandale with Clydesdale. The difficulties in engineering a road in so narrow and steep a valley prevented its use as a main line of communication until the construction of Telford's road

¹ See the 6-inch Ordnance Map, sheet D xvi, SE, first edition, 1861. In Martland's account of the road as proceeding 'from Darnham-shaw . . . to Thirslyholm,' where 'it intersects the river Annan near the confluence of the said river, and the riverets of Moffat and Avon' (*Hist of Scotland*, i, p. 193), Thirslyholm is probably the modern farm of Holms. Cf. Macfarlane, *Geographical Collections*, 1, p. 367 (1723), where it is called 'Thirlholme'

in 1821 and of the railway in the mid-nineteenth century. Thus the medieval hollow-ways and even the earlier metalled-roads¹ follow much the same course as the Roman road between Black Fell and Little Clyde.²

From Coats Hill to Black Fell the surveying of the road has presented no difficulty: it is laid out in two substantially straight lines. Between Black Fell and Little Clyde³ the country is very different, presenting a series of rounded hill-slopes separated by small streams transverse to the Roman line. This has required a different treatment: the road often follows a curving contour-course very unlike the *alignement* normally preferred by Roman engineers. Even to-day it is in excellent preservation throughout this sector owing to its remoteness from modern routes. The causeway is entire for many miles together, while the presence, much as the Romans left them, of bridge-abutments, cuttings, embankments, side-ditches, and quarry-pits affords an opportunity of examining the detailed engineering of a Roman trunk-road such as occurs at comparatively few other places in Britain.

In the field (D. xvi, 11, 218) between the main road and railway to Moffat, north of Lochhouse Tower, no signs remain. The railway is passed at its intersection with a field boundary, and the road can be traced across most of the next field (*ibid.* 216) ascending Coats Hill in a direction north-west by north.⁴ In the lower half of the field there is a stony causeway 7 paces wide, though the elevation is very slight. Through the arable ground towards Coatshill Quarry a belt of stones occurs on the same line, developing into a low mound when the grass verge is reached. In the north-west corner of the quarry, exactly on the Ordnance line, a poor section of the road is visible. In the rough pasture

¹ The term 'hollow-ways' is applied without distinction of age to the sunk tracks, worn down by generations of traffic, which are found especially on uncultivated moorland. Such ill-constructed paths still formed the 'main-roads' of the sixteenth and seventeenth centuries. Abandoned metalled-roads of the eighteenth century often remain as grassy mounds still serviceable for light wheeled traffic.

² Cf Inglis, *Proc Soc Ant. Scot.*, lvi (1923-4), pp. 213-7. This sector was known to Roy, who marks it on his MS. Map of Scotland as 'Watling Street a Roman Way.'

³ Martland's description of this sector, *Hist. of Scotland*, i, p. 193, may be referred to as typical of the vagueness of the older accounts. Cf. Roy, *Milit. Ant.*, p. 104; Chalmers, *Caledonia*, i, pp. 121, 134.

⁴ Cf. J. Macdonald, *Proc Soc Ant. Scot.*, xxviii (1893-4), p. 314.

above the quarry the mound is evident a little east of a small slack. Across the next field (*ibid.* 205), now pasture, the causeway is very plain as a mound and stony belt with a hollow on each side ; it is nearly parallel to the west field-wall at 45 yards distance, crossing the field from gate to gate. Beyond the further gate, where the line crosses an old drove-road immediately north of the boundary-wall, stone paving is visible

Moffat golf-course is next crossed. For 700 yards until Chapel Plantation is reached, the causeway is very distinct ; it passes a little west of the trees by the club-house. From here the mound is seen to advantage both to south and north, the width is about 21 feet. Burnswark and Tassiesholm are both visible from the summit (674 feet) a little to the west. At a sandstone outcrop hereabouts there appears to have been ancient quarrying, perhaps for road-metal. North of the club-house the causeway, with a ditch to the west, is well preserved under a growth of bracken ; it measures about 19 feet in width and shows a camber of nearly 18 inches. Across the last fairway the mound is lost, but the line can be seen from the air as a belt of parched grass, and the mound reappears at the edge of Chapel Plantation (*D.* xvi, 7, 161), where a wall 'humps' over it. Towards the north end of the plantation a cutting some 20 feet wide and 60 yards long carries the road on a graded slope through a small bank.¹ There are no signs in the wet ground at the corner of the next meadow (*ibid.* 125), and 60 yards ahead a lane is reached which curves gradually across the line, obscuring all traces south of a cottage, where it diverges to the left.

In a small field (*D.* xvi, 7, 159 in part) beyond the cottage the causeway is distinct for 50 yards, and continues as a very low mound in an arable field (*ibid.* 126) towards an old plantation (*ibid.* 127). Across this for 70 yards the mound is in very good order. It is slightly revetted on the east side above wet ground, on the west side there is a ditch $1\frac{1}{2}$ feet deep. The causeway is about 24 feet wide, with a camber of 2 feet—dimensions nowhere found to have been exceeded along this road. Much rough stone was visible in 1938 below an overturned tree-stump, while the north wall of the plantation 'humps' over the mound. From here the road can be seen as far as the sky-line, half a mile to the north. In 1893 sections cut through the road somewhere in this sector

¹ In 1938 trees were being felled here, making detailed observation difficult

revealed metalling for a width of 21 feet with a slight camber. There was apparently a rough kerb on the east side; the stone was graded, a 4-inch layer of small stones resting on an 11-inch layer of larger stones set in clay.¹

For 120 yards beyond the plantation there is only a low mound. Conditions then improve, and the causeway is in fine order as it slowly ascends by a natural terrace (D xvi, 6, 50) a little east of the ridge-top, it is 21 feet wide, with a well preserved ditch on the west side. The maintaining of a uniform upward slope has involved the occasional use of small embankments in hollows as well as across boggy ground. Opposite a sharp bend in a wall on the right, quarry-pits occur on the slope to the left of the road. The road is then lost for some 80 yards across wet ground marked by a tall growth of reeds, and traces continue indefinite for two or three hundred yards beyond. As a stone dyke is approached the mound reappears, entering the next field 33 yards west of an angular bend in the wall—rather further west than the line marked on the Ordnance Map (D. xvi, NW.)

The causeway is very clear for 700 yards across the rough pasture of the next field (D. xvi, 2, 63). The road keeps a level course on dry ground, below the peat-covered summit but above ill-drained marsh on the east. The mound maintains a width of some 20 feet; the side-ditches are distinct but shallow, except where the road passes over a hump in the ground, where they remain to a depth of some 2 feet.² For the extent of the field quarry-pits occur at short intervals at about 13 yards distance from the west side of the road. They are oval or circular hollows, 15 to 20 feet in diameter and about 1½ feet deep, occasionally more. Some are pear-shaped, with a ramp along which the material has been carted or carried for the construction or repair of the road. Such quarry-pits are a common feature beside many Roman roads, but nowhere on this route can they be better studied than here.³

¹ J Macdonald, *Proc. Soc. Ant. Scot.*, xxviii (1893-4), pp 314-5. The road was also exposed two miles to the north and 'near the footpath over Coats Hill.'

² This section of the road strongly resembles Dere Street where it is preserved as a great causeway a little north of Foulplay Head (1-inch Ordnance Map, Scotland, sheet 86, square D9)

³ These quarry-pits were first described by Neilson, *Per Lineam Valli* (1891) pp. 32-3

Half-way across the field there is a change of direction of 18 degrees to the east, so that the course aims at Ericstane Hill three miles ahead.¹ For the last $2\frac{1}{2}$ miles the line has been substantially straight, but changes in direction of a few degrees do occur at the first wall north of Coatshell Quarry and within Chapel Plantation near the south wall. These illustrate well the point-to-point surveying of the road (a feature that is very apparent from the air), for they occur at the two places in this sector where the contours of the ground necessitate sighting-positions.

The road disappears in a small slack just before the north wall of the field is reached. On the gentle slope leading up from there to the summit at B.M. 953.8 (D. xvi, 2, 6), the causeway is very faint but marked by tussocky grass between boggy ground on either side. The quarry-pits become intermittent and the road has sunk in a bog on approaching the flat summit, where the causeway is very low but marked by a growth of rushes. From here the causeway is visible extending across the valley of Holehouse Linn to the next hill, a mile to the north.

For the first 250 yards of the descent to the stream the mound is prominent. It again becomes evident a little south of a lane that connects the Edinburgh and Glasgow roads. Of the passage across Holehouse Linn there is now no sign. Perhaps there was a wooden bridge of some height, where the road-mound is first recognizable on the north bank it lies high above the stream.

The causeway, with side-ditches, is very clear for 100 yards beyond the stream, passing 33 yards east of a small knoll² on which a ruined sheep-fold now stands; a partial section dug here in 1939 disclosed, below the turf, small sandstone blocks packed together to a width of 18 feet. At 90 and again at 130 yards beyond the fence above the Linn a quarry-pit occurs to the east of the road; the second measures 10 yards by 5. The causeway is then carried past hummocky ground and the even gradient of the upward slope is maintained by the use of small cuttings. At 300 yards from the fence a series of quarry-pits, each about 20 feet in diameter,

¹ The hill by Eric Stane (the Erectstonebrae of Roy's MS Map), south of the Devil's Beef Tub. Errickstane Hill is a different summit, $2\frac{1}{2}$ miles further to the north-west (cf. D ix, NW.)

² The 'Roman fortlet' recorded as observed here in *Antiquity*, xiii (1939), p. 281. proved to be imaginary. Three trenches dug in September 1939 showed that the mound was entirely natural.

has been dug in a hump immediately west of the road. Occasional stones of the causeway are visible here. 60 yards further on a cutting 4 feet deep has been made for the west side of the road, on the east there is marsh. Presently a line of quarry-pits commences on the west and continues for 150 yards. The road-mound, with a ditch on either side, is very well preserved here (Plate VI); it measures 21 feet in width. There is a gap of some 150 yards where boggy ground encroaches on the line, but the mound then reappears and continues for some distance. The road now passes Gilbert's Rig (D ix, 14, 990), a green knoll anciently quarried for sandstone. From here the view southwards extends over the whole of Annandale and includes the summit of Burnswark.

The whole of the sector from Coats Hill to Gilbert's Rig is easily surveyed from an aircraft. As seen in a bird's-eye view, the causeway is visible almost continuously (Plate VI), its partial disappearance on the surface is mainly due to sinking in marshy ground, and in such places the course often remains visible from the air, either as a belt of reeds or as a line of parched grass after a spell of hot weather.

At Gilbert's Rig there is a change of direction through 4 degrees to the east, as shown on the Ordnance Map. The road dips slightly in crossing a wet patch and reascends as it approaches a stone wall some 300 yards north of the Rig. For three or four hundred yards beyond the wall the road crosses wet moorland¹ where the causeway has sunk in the bog but can be felt underfoot as solid ground. It passes immediately east of a grassy knoll which carries a number of quarry-pits. Descending gently, the road keeps well down the east slope of Archie's Hill (D. ix,

¹ It was perhaps on the moorland hereabout that a gold brooch with an inscription relating to the Vicennalia of Diocletian (A.D. 303) was discovered in 1787. For the character of the object see Curle, *Proc. Soc. Ant. Scot.* lxvi (1931-2), p. 370, No. 32, where, however, there is confusion between Ernickstane Hill in the parish of Crawford and the Ericstane Hill in Moffat parish where the object is recorded as having been found 'as some workmen were digging peats', see *Gentleman's Magazine*, 1787, pt. 1, p. 540, cf. *Stat. Account*, II, p. 288 (Moffat Parish, 1792), and IV, p. 522 (Kirkpatrick-Juxta Parish, 1792). On the wet ground referred to in the text 'digging peats' has gone on for many years. It lies in Moffat parish on the east shoulder of Archie's Hill, within three-quarters of a mile of the summit of Ericstane Hill. In Roy's MS. Map (which does not correspond in detail with the Ordnance Map of this area) his 'Erectstonebrae' seems to include Archie's Hill, a spur forming part of the slope up to Ericstane Hill.

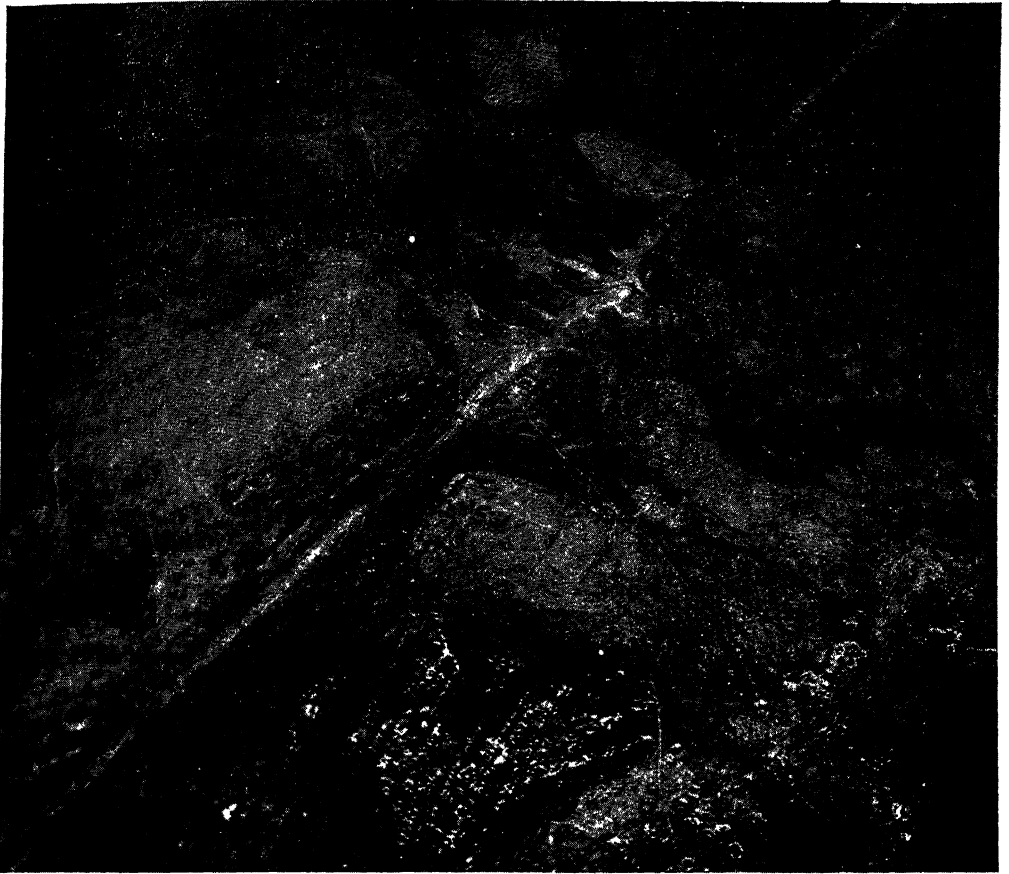


Photo C G M Alington

ROMAN ROAD NEAR GILBERT'S RIG, NORTH OF MOFFAT, SHOWING QUARRY-PILS

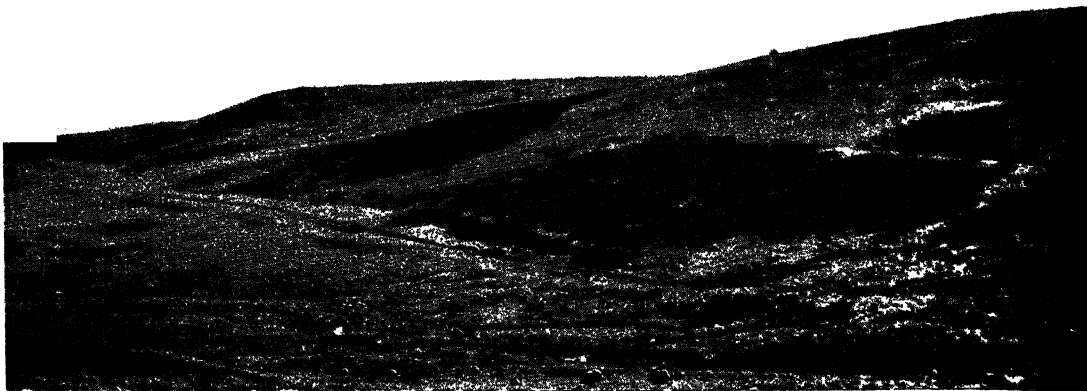


Photo O. G S Crawford

IAN ROAD, HOLLOW-WAY, AND EARLY METALLED ROAD RUNNING TOGETHER ALONG FOOT OF HEATHER-COVERED
SLOPE, SOUTH-WEST OF ANNANHEAD MOSS, LOOKING SOUTH-EAST



Photo O G S Crawford

B, EARLY METALLED ROAD BY ANNANHEAD MOSS, SHOWING SHARP SCARP AT EACH EDGE,
LOOKING SOUTH-EAST

10, 978). 80 yards north of the knoll a prominent quarry-pit lies to the west of the road, which then disappears for 40 yards in a wet slack that crosses the line obliquely. Beyond this the mound is in good order and stonework is visible in watercourses. A large hollow, once the site of a spring, lies across the line. There follows a gap of 110 yards in which only rough stones occur in drainage-channels, but opposite the 47th milestone on the high-road from Edinburgh the mound is in fair order, with the east side-ditch visible. Wet ground then intervenes and, until the high-road is reached, there are few further signs except occasional stone-pitching in drainage ditches.

The Edinburgh road is crossed obliquely, and beyond it the mound is visible approaching Moor Gill, 'a small stream that has carved out a deep narrow channel which would be an obstacle to vehicular traffic. The road is therefore carried obliquely down the south bank in a cutting, 40 yards long, which turns sharply up-stream, while a corresponding, but shorter, cutting down-stream leads up the north bank. These cuttings fix the crossing at a point 55 yards below the modern Auldhousehill bridge. Probably the stream was spanned by a (wooden) bridge; an excavation for soil on the west side of the south cutting seems to have provided material for the embankment at the stream-edge. The road then crosses the short spur between Moor Gill and its tributary Stone Gill. At the passage of the latter a shallow cutting leads straight down either bank. The causeway-mound can be clearly traced for a further 150 yards to where the high-road is recrossed at B.M. 1121.8.

The end of the straight sector has now been reached. For the next five miles a straight course is hardly ever maintained for any distance, nor are the changes of direction set out at an angle. Instead, the route winds round a series of convex hill-slopes, a behaviour determined by the nature of the terrain. For this reason the exact line of the Roman road is now difficult to trace, and the difficulty is increased by the occurrence, often close beside it, of both 'hollow-ways' and early metalled-roads,¹ the remains of seventeenth and eighteenth-century communications.

The road ascends steeply and a sheepfold is passed on the left. The line aims at the hollow between White Type and Ericstane Hill, which

¹ For the use of these terms see above, p. 18, n. 1.

offers the easiest passage across the ridge. Later routes like the metalled-road have resorted to a zig-zag treatment of this steep slope ; on the Romar road cuttings alone are employed. As the summit is approached, Romar road, hollow-way, and metalled-road are parallel for a short distance. Just before the source of Stone Gill is reached at Willie's Well, a quarry of metalled-road period cuts into and destroys both hollow-way and Roman road. At the divide the Roman road bends to the west round the shoulder of White Type ; the course is shown in the first edition of the large-scale Ordnance sheets.¹ On this shoulder what was probably a Roman signal-station was observed from the air in 1939 and located on the ground a year later ; it lies 38 paces west of the road. A circular ditch, broken on the east by an entrance 6 feet wide, encloses a level area measuring (across the ditch) 10 yards in diameter. The site commands wide views down Annandale, and signals could also be sent direct to Redshaw fortlet, about $2\frac{1}{4}$ miles ahead.

Hereabout the old roads which have been accompanying the Roman road for some distance branch in two directions, one route passing the Devil's Beef Tub on its way to Upper Tweeddale and Edinburgh, the other running north-westwards through Clydesdale. Careful search both on the ground and from the air revealed no sign of a northward branch of the Roman road. The course of the road is directed to Clydesdale, like the north-westward branch of each of the later roads ; and these follow the Roman line so closely for half a mile along the foot of the slope on the south-west side of Annanhead Moss that all three run alongside one another with a combined width of only 20 paces (Plate VII, A).² The Roman road—best preserved towards Hassock Well—is uppermost, forming a rather narrow shelf with a blunt scarp cut in the hill-side at its south-west edge. It is closely accompanied by the hollow-way, which in places obliterates it. The metalled-road (Plate VII, B) forms a broad, firm causeway 9 paces wide, and the sharp scarp at each edge contrasts with the much more weathered character of the Roman road. The hill-side quarries are of metalled-road period.

As Hassockwell Burn is approached, the Roman road bends to the right and is crossed by the metalled-road. It is then lost in wet ground

¹ D. ix, NW (1861) and L. li, SW. (1863).

² Cf. Inglis, *Proc. Soc. Ant. Scot.*, lvi (1923-4), pp 215-8, with Figs. 4 and 5.

for 100 yards, but for most of the ascent to Divoty Knowes the mound of the causeway is visible pointing towards an angle in the modern road to Edinburgh. The north-westerly course is resumed at the summit, where a quarry is passed which is later than the Roman road and the hollow-way, into which it cuts. The causeway can be traced, accompanied by the hollow-way, round the shoulder of the hill, where a few quarry-pits occur on the left, and down the descent to March Burn. Occasionally stonework shows beneath the grass. Near the stream later tracks and natural gullies obscure the course, but embankments appear to have carried the road where it crossed the burn, perhaps by a (wooden) bridge. Here the route enters Lanarkshire and the parish of Crawford. The road bends westward to a tributary, Rowantree Grains, where again the crossing is confused, this time by erosion. For 200 yards thereafter the Roman road is obliterated by the hollow-way. Half-way across the spur between Rowantree Grains and the next stream, Redshaw Burn (L. li, NW.), the metalled-road rejoins the line. A little before the junction a quarry of metalled-road period has been dug through both Roman road and hollow-way. Hereabout the Roman road has been worn down, then improved and re-surfaced with macadam in the metalled-road period. The two streams which unite to form Redshaw Burn are crossed above their junction. At each crossing erosion and reconstruction have obliterated Roman features, but a short length of the mound of the Roman road remains on the east side of the second stream. Beside this stream, 65 yards south of the road, lies a Roman fortlet, doubtless so placed to guard the double crossing (Plate XL).

Opposite the fortlet the metalled-road¹ diverges to take a lower course than the Roman road, to which it forms a loop for the next two miles. The hollow-way, on the other hand, keeps to the Roman line. All three bend round the side of Errickstane Hill (L. li, NW.). 620 yards west of the fortlet a fence is reached beyond which an old quarry lies to the right of the Roman road. After $\frac{1}{4}$ mile the causeway is well preserved; as far as the gully by Williemont Hass it runs to the right of a path which bends round the hill on the Ordnance line, from which the causeway is as much as 50 yards distant at one point. Beyond the

¹ This is not marked on Ross's Map of 1773, and presumably its construction is later than that date.

gully, Roman road and hollow-way run parallel, 25 yards apart, for 150 paces. A few hundred yards of rather broken ground is then passed. Just before the descent begins to the Fopperbeck Burn (L. li, NE.) an old track crosses the line obliquely. Down the slope to the burn the shelf of the road is very clear; the hollow-way, now enlarged as a watercourse, has worn deeply into the causeway. A few quarry-pits occur on the hill-side on the left. There are no signs of the Roman crossing of the stream, nor is any trace of the road discernible up the lower part of the opposite slope, where a series of sinuous gullies has broken up the ground.

The line climbs round the south shoulder of Nap Hill, where the shelf of the Roman road is gradually encroached upon by the hollow-way, the worn condition of which emphasizes the causeway for a few hundred yards. Both are very prominent at the highest point on the shoulder, where they have taken advantage of a natural shelf. Here the climb ends. A row of quarry-pits appears on the uphill side. The extensive view to the south-east includes the crossing of the Fopperbeck Burn and the further course of the road round Errickstane Hill.

As the track descends, it curves northwards towards a sheepfold, in passing which a cambered mound six or seven paces wide seems to represent the Roman causeway unmodified by later usage. The metalled-road, which has followed a separate course for the last two miles, rejoins the line at an old quarry, whence a level track continues along the hill-side, carrying the modern path from Upper Howecleuch to Little Clyde. Presently a fence encroaches on the left, and further on the field-wall runs on a large cambered mound which probably represents the Roman causeway. In the corner of the field on the left (L. 1, NE., 618), near the gate, Clydesnap Cottage formerly stood, and all traces of the Roman road are lost hereabouts. Some 40 yards ahead, however, the road-mound is visible by the east edge of the field L. 1, NE., 615,¹ whence the track descends to the marsh in the valley-floor, where all traces of the Roman road have long disappeared. The existing track passes Clydesburn Cottage (the building now serves as a barn) and crosses the present artificial course of the Clydes Burn at a ford, beyond which it is joined by a modern lane to Little Clyde farm near the centre of the south rampart

¹ Field-number taken from 6-inch sheet Lan. 1, 1st ed., 1863.

of a large Roman camp (see p. 112), but it is uncertain how far the track coincides here, and for some distance west of the camp, with the Roman line. We are now at the watershed between the Evan Water and the Clyde. Onwards for many miles the Roman road follows the Clyde valley, like the modern high-road and railway.

THROUGH CLYDESDALE

(For maps see Plates X and XII.)

West of Little Clyde camp there is no trace of the Roman road for some distance. Perhaps the lane past the steading of Ring is approximately on the Roman line, for by this farm the west wall of the field L. 1, NE, 603, just south of the gate, humps over a mound which may mark the Roman causeway. At the modern quarry by Paddy's Rickle Bridge (L. 1, NE.) digging and tip-heaps have destroyed all ancient features, but inspection shows that the Roman road did not cross the hill-side to the north of the quarry.

The next mile is planned in two straight and nearly equal sectors,¹ for the greater part of which the metalled-road has obliterated Roman work. The well-preserved, cambered, grass-grown causeway which begins 100 yards north-west of the quarry must be dismissed as entirely modern. Nor are there any satisfactory traces at Nether Moss Cleuch, where stream erosion has altered the lie of the ground. Only at the turn to the second sector, south of an old sheepfold, does the modern track leave the Roman line, skirting a piece of wet ground, which the Roman road went boldly across. For 150 yards this is now lost in the marsh, beyond which, however, what is probably the Roman causeway reappears as a conspicuous mound for a short distance before it is rejoined and destroyed by the modern track. For the next half-mile to Bodsberry End the road has been reconstructed in its entirety. The low cambered mound seven yards wide often looks suspiciously Roman in character, but the steepness of the scarps on the uphill side above the drainage-ditch and the unworn condition of the top layers of metalling show that this is an eighteenth-century metalled-road preserving only the alinement of its Roman predecessor. A number of old quarry-pits resembling those

¹ Marked 'Roman Road' on the 1863 6-inch Ordnance Map L. 1, NE.

south of Ericstane Hill are seen here, two, now reed-grown, which may well be Roman, occur 17 yards north of the road on either side of a streamlet opposite a cottage by the railway

Bodsberry End commands an extensive southward view up the wide valley of the Daer Water, along which the Roman road from Nithsdale approaches to join the Clydesdale road at Crawford, after a parallel course of three miles on the west bank of the river. Opposite the cottages at Bodsberry End the ground has been disturbed by digging, and the track has been re-used as an approach to a quarry which now lies abandoned on the hill-side near an old plantation. The road rounds the steep south side of Bodsberry Hill,¹ keeping clear of the low marshes beside the Clyde, which would always be liable to flood. Two hundred yards west of Bodsberry End cottages the main Glasgow road is reached, and for the next mile and a quarter to Rowantree Pool (L. xlvii, SW.) no certain traces of the Roman road remain. It is probable, however, that its course is represented by the modern road, for this follows the earlier metalled-road² which accompanies the Roman road throughout the Clyde valley, and the line is strongly suggestive of a Roman origin, still preserving something of a point-to-point lay-out and being designed to run far enough above the Clyde to be safe even from the highest floods. It leads past Bodsberry Cottages and Newton House³ towards New Bridge. The mound of an old track is visible in a copse on either side of the Newton Burn (L. xlvii, 14, 348) and below the wall immediately north of the lane to the light-bridge to Elvanfoot (ibid. 319), but this is not Roman work; and between Newton House and New Bridge drastic road-reconstruction recently carried out has completed the obliteration of all ancient features.

At New Bridge the modern road crosses the Clyde, and the Roman road, which continues along the east bank of the river, is now well preserved

¹ Contrast Irving, *Journ Brit. Arch. Assoc.*, x, 1855, p. 4, who takes the road either over the top of Bodsberry Hill or through the ravine to the east. There are no traces in this direction, nor is the course a likely one. Bodsberry Camp, where Irving undertook some excavations about 1854, is a native work.

² Marked 'Old Road' on the Ordnance Map L. xlvii, SW. Cf. Ross, *Map of the Shire of Lanark* (1773), and Forrest, *Map of Lanarkshire* (1816).

³ The residence of G. V. Irving, who described the camps of the Upper Ward of Lanarkshire, *Journ Brit. Arch. Assoc.*, x (1855), pp. 1-32.

the whole way from Rowantree Pool to Crawford Castle. This sector has attracted the attention of topographers from Roy and Maitland onwards, though none gives details of its course¹ Round the curve of the Clyde towards Crawford the road is planned in a series of short, straight lengths, which avoid the low river-holms. From the right-angle bend of the modern road down to the older of the two bridges at Rowantree Pool a lane leads northwards through the plantation L. xlvii, 14, 311 Just beyond the field-gate outside the plantation the mound of the Roman road is visible south-east of a wall which stands on its left edge. The wall passes very obliquely on to the causeway and runs along the crest at the far end of the first field on the left (L. xlvii, 10, 310). The side-ditches, both reed-grown, are clear, that on the left lies two yards from the wall and is best seen from the north-east end of the field. The stone wall stands on the causeway for the length of the next field (ibid. 308) until Shilling Cleuch is reached, where a 'Roman camp-kettle' was found over a century ago.² For the last quarter of a mile the line of an old aqueduct has been visible meandering round the hillside; it leads to the site of a building marked by foundations visible below the turf on the west of the Cleuch.

Fifty yards ahead the causeway passes under the field-wall junction at the left-hand post of a gate here, and forms a conspicuous hump immediately beyond, on the south side of a nameless stream, the modern track makes a loop to the right to seek an easier passage. The road ascends from the stream, and after one hundred yards bends northwards on a well-graded course to the summit of a little ridge, where it turns to the east to take up a new alinement. Fifteen yards to the east is an ancient excavation, possibly Roman, 34 yards long and 5 yards

¹ Roy, *Milit. Ant.*, p. 104 (though the road on the east bank of the river from Newton to Crawford is not shown in his MS. Map); Maitland, *Hist. of Scotland*, i, p. 193 'The military way continuing its course northwards to Newton, and thence winding eastwards, runs along the southern side of the river Clyde, where it is plainly to be seen'; whence Chalmers, *Caledonia*, i, p. 134

² Irving, *Journ. Brit. Arch. Assoc.*, x (1855), pp. 5-6 'The Roman road . . . continues in a north-west direction along the right bank of the Clyde, at a little distance from that river. In the bed of the Shilling Cleuch Burn, one of the small tributaries which it crosses, a Roman camp kettle was found about forty years ago . . . it has long been lost sight of.'

wide, formed by the coalescence of several quarry-pits. At this point Crawford fort comes into view, though now partly obscured by a belt of trees. The last two bends brought the road very close to the Clyde. Here it ends abruptly on the brink of a fifty-foot cliff, where it has been destroyed for a short distance by erosion of the river. Gravel and stones, however, are visible in the bank, and after a gap of 120 yards the road reappears on the same line. In the form of a low mound, best seen from some distance off, it crosses a rough pasture, formerly arable, at twenty yards distance from an old sheepfold. Having passed the Cake-law Burn (where the cutting on the south bank seems to be modern work), the causeway continues along a shelf 15 or 20 feet above the Clyde. Two hundred and fifty yards ahead of the burn the road changes direction to the west through nearly 30 degrees. Here it is eroded by a streamlet (L. xlvii, SE.) The embankment approaching the streamlet from the south looks rather modern. For the next hundred yards traces of the road are reduced to occasional large stones seen amongst the grass, but then the low mound reappears and, as it leads down to the Glespin Burn, becomes a prominent heather-covered causeway, seven paces wide, with side-ditch visible on the right. The causeway ascends steeply from the burn, bending sharply to the east, and for twelve yards above the stream-bank the mound is seven paces wide and two and a half feet high. Glespin Cottage is passed, and 54 paces before the paddock-wall a large field-bank on the left mounts the causeway at right angles and curves gradually off into the east side-ditch. The wall humps slightly over the road, and hereabouts there is a change of direction to the west through an angle of 25 degrees. The road-mound may be traced along the east edge of the paddock, and as a gate is approached becomes visible ahead for nearly one-third of a mile.

One hundred and twenty five paces beyond the gate loose stones of the metalling are seen in a streamlet which cuts through the road-mound. This route is the traditional medieval road along the Clyde, and it is very evident here how traffic has encroached upon and worn down the Roman causeway, leaving only a high, narrow bank. The modern cart-track from Glespin Cottage meanders across the Roman line, sometimes running to the east of the causeway, sometimes swinging on top of it, or crossing to the other side. A length of the causeway remains in good order where

it passes a streamlet opposite Bellfield farm. rammed gravel forms the foundation for a road nearly seven paces wide with a camber of two feet. The field-wall north of Bellstane Craig is reached, the centre-line of the causeway passing under the right-hand gate-post. Just past the gate the road bends through a few degrees to the east and again westwards through 15 degrees 150 yards ahead (L. xlvii, 6, 149).

As Midlock Water is approached (L. xlvii, NW.) the modern track meanders across the mound, keeping mainly on the west slope, and then turns to the north to seek a foot-bridge higher upstream. The Roman causeway continues in a straight line to the south bank of the Midlock Water as a cambered mound, seven yards wide and nine inches high, which is marked in dry weather by a belt of parched grass (field xlvii, 6, 148). Slight traces of a side-ditch remain on the right. A spread of large stones of road-metalling underlies the turf at the top of the stream-bank. The road is interrupted for 200 yards across the flats (L. xlvii, 6, 146), but the low mound of the causeway reappears in the same line in the paddock (*ibid.* 98) west of Midlock farm. The road is clearly leading to the fort, which lies west of Castle Mains farmhouse only 300 yards away, but no traces are seen across the low meadows by the Camps Water (*ibid.* 81). Hereabouts it will have been joined by the road from Nithsdale, which for the last three miles has followed a parallel course on the west bank of the Clyde¹

From the Crawford fort (pp. 113-4) the traditional line leads over the col north-east of Castle Hill to rejoin the river at Abington two miles ahead. This curious course, involving a climb of 450 feet, was perhaps designed to avoid the rather narrow valley round the great S-shaped bend of the Clyde. Maitland was the first to describe this route. 'Leaving the said town of Crawford on the western side of the said river, the causeway is lost in the arable grounds, but in ascending the hill of Serrat it plainly appears again, and, crossing the summit of the said hill, descends the northern side of it to the village of Serrat, whence wending eastwards, it becomes the common road, and for divers miles runs on the southern side of the river Clyde, where it is to be seen in many

¹ See below, pp. 55-6.

places.¹ This view of the course of the road has been confirmed by Mr. O. G. S. Crawford, who walked over it in the spring of 1939, and whose observations then were later verified in detail by aerial survey.

Traces of the road begin a quarter of a mile north-north-east of Castle Mains farmhouse, near the weir across the Camps Water, where a large stony hump is cut off abruptly by river-erosion. This continues north in the form of a low broad mound, visible from the air in June 1939 as a belt of burnt grass, across two fields (L. xlvii, 2, 73 and 76) to an old plantation known as Campside Wood. The road ascends the hill in a sinuous course which includes three zigzags—curious engineering, perhaps designed to avoid a series of mosses. The first of the sharp bends lies within Campside Wood (*ibid.* 75). From the bend the road climbs for 200 yards along a shelf in a direction slightly south of west. On emerging from the wood it is crossed by a bank and ditch, which are unbroken and must therefore be later, though they are clearly fairly ancient.² An old quarry, a little further west, is also later than the road, which is covered with quarry-tippings. There is a second hair-pin bend, and almost immediately a change in direction to the north-west, here the causeway is visible ascending on a shelf along the east side of the valley of Berries Burn, with a few quarry-pits on the right. After 300 yards advantage is taken of a natural cutting, and the road sweeps to the east on a contour-course round the shoulder of the hill to Raggen Gill, where the causeway is accompanied by hollow-ways. It is soon joined by the 'Roman road' of the 1864 Ordnance Map.³ By a gentle

¹ *Hist. of Scotland*, 1, p. 193. Cf. Roy, *Milit. Ant.*, p. 104 'The road having thus united with the Nithsdale branch, takes the shortest course over the hill, and then descends again into the valley of the Clyde, passing by places called Gateside, Causeway, and Catchaple.' In Forrest's *Map of Lanarkshire* (1816) the Roman road is marked on this line. Cf. also Chalmers, *Caledonia*, 1, p. 134, and Irving, *Journ. Brit. Arch. Assoc.*, x (1855), p. 7. Hence its inclusion in modern guide-books; cf. N. Hunter and G. Haddow, *Pictorial Guide to Upper Clydesdale* (1907). Serrat is omitted from modern maps, it is presumably the hill north of Crawford of which the twin summits are now called Castle Hill and Raggengill Hill.

² In the 1864 edition of the Ordnance Map the bank is erroneously marked as 'Roman Road'. It appears to have been a boundary-dyke, perhaps of the Castle Park, it can be traced along the fence to Berries Burn and then south alongside a wall towards the Clyde.

³ The bank referred to above. See previous note.

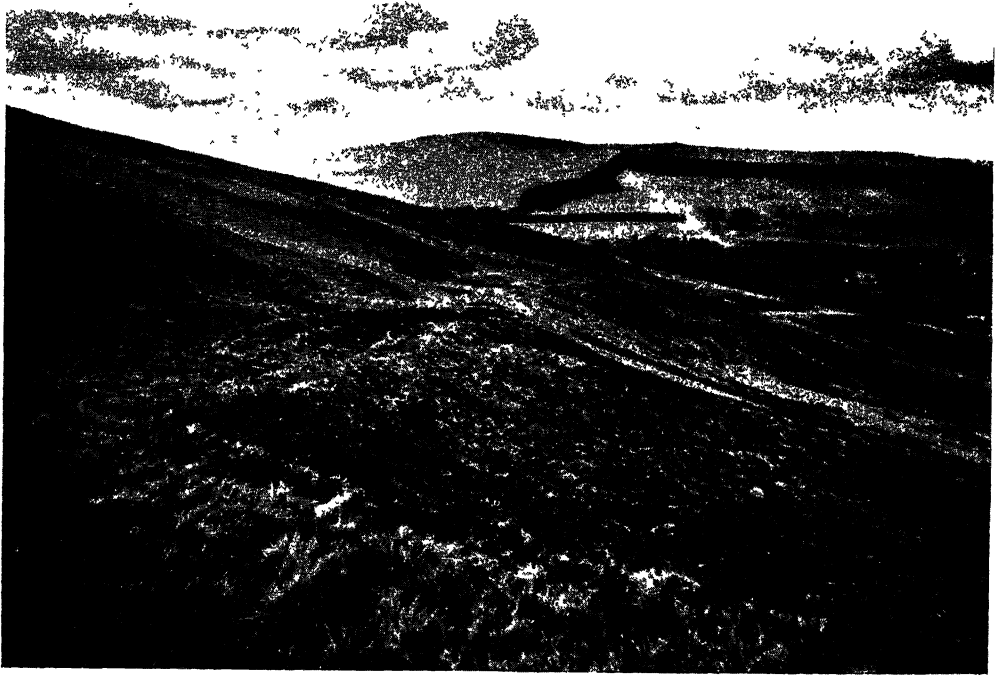


Photo O. G. S. Crawford

ROMAN ROAD ON NORTH SIDE OF RAGGENGILL HILL, LOOKING WEST TOWARDS ABINGTON

ascent, maintained by cuttings in the steep hill-side, the broad shelf of the road approaches the summit. All the remains that are to be seen are of metalled-road period. Half-way up the slope the foundations of a building, now completely grass-grown, stand on the track, occupying the whole of its width. At the top of the pass (some 1250 feet high) the road remains as a well-preserved, heather-grown mound, which extends along the south-west side of the marshy ground thereabouts. The metalled-road cuts into its left-hand side.

From the summit, the shelf, here 15 paces wide, bends to the west. This is the 'Roman Road' of the 6-inch Ordnance Map of 1864 and in origin it probably is Roman, though remodelled by the metalled-road builders and cut about by later tracks (Plate XI). As Southwood Plantation (L. xliii, 13, 13) is approached, the Roman road, leaving the modern track, which continues to the wood, curves northwards towards Raggengill Burn. Traces are not very distinct, but at one place a partial section of the metalling is exposed in the north bank of a streamlet. Here the road enters the former parish of Wandell, where its course is described in the *New Statistical Account* 'Watling Street, as it has been called, entered the parish near to the base of Arbory hill, and passed Cauldchapel and Wandellmill, where it may still be traced; but farther down than this, it cannot be followed with certainty'¹. For some 300 yards beyond the burn the road crosses a disused golf-course, where it is preserved as a causeway converging with the modern lane from Southwood (ibid. 304). Beyond the next streamlet no traces remain; the ground is much disturbed round the site of an old chapel,² where the low banks perhaps mark the limit of the burial-ground. Opposite a new bungalow the lane coincides with the Roman road for 70 yards, but at the gate where the lane bends to the railway the Roman road continues in a straight line. It is visible as a stony hump when the field (ibid. 298) has been newly ploughed.³ The flat-topped hillock 100 yards to the east is Irving's earthwork No. 7.⁴ At the next field-wall the Roman road is only a few yards east of the lane.

¹ *New Stat. Account*, vi, p. 818 (Wandell and Lamington Parishes, 1840).

² Entered in Forrest's Map as 'site of a Roman chapel'.

³ As in April 1939, when the stony belt showed sufficiently clearly to be photographed.

⁴ Irving, *Journ. Brit. Arch. Assoc.*, x (1855), p. 8, cf. *New Stat. Account*, vi, p. 817.

Nothing remains in the field 291, but it may be conjectured that the road continued in the same line to Cold Chapel, a course that would take it beneath the railway.

There was probably a slight bend to the east at the railway-bridge at Cold Chapel, for the lane marked 'Old Road' on the Ordnance Map seems to be on the Roman line across field 288 and past Dikefoot cottage. This lane bends to the east opposite a circular earthwork (Irving's No. 8), 90 yards in diameter, on the slope to the right, and here the stony ridge of the Roman road reappears in field L. xliii, 9, 284, where it was clearly visible under a crop of turnips in November 1938. It runs some 20 or 30 yards west of the modern track. The Roman road continues in a straight line in a direction 22 degrees east of north for $1\frac{1}{4}$ miles, in which distance it is crossed and recrossed by the lane. Opposite the wall between fields 284 and 279, the road must lie just east of the lane, within field 280, but this was formerly arable and nothing is now visible. One hundred and thirty yards ahead the road is again west of the lane and enters the arable field 279, across which a stony belt was visible in 1938 amongst a turnip crop.

A good view now opens up northwards towards Wandel and Robertson. Nothing is visible across the next three or four fields; the road probably passed about 90 yards east of Littlegill just above the Dam there (272a), whence a continuation of the line leads after a third of a mile to a well-preserved length of causeway. The mound, six yards wide, extends across two large fields (L. xliii, 6, 261a and 260) until it is a few yards east of the main road to Edinburgh. Though worn down by cultivation, it is too big and broad to be entirely the remains of a field-bank, but it is accompanied by an old field-boundary, which approaches very obliquely from the east, as marked on the 1864 Ordnance Map, and crosses it half-way through the second field. This is evidently the sector referred to by Stuart as 'passing by Wandel Mill, where some traces of the causeway still exist.'¹ The 'old road' that runs obliquely across field 260 was in use in 1864 serving Causeway House, which now stands in ruins a furlong east of the Roman road. The straight length of main-road

¹ *Caled Rom.*, p. 256. Wandel Cottages, $\frac{1}{4}$ mile to the north, are marked as 'Old Wandel Mill' on the 1864 O.S. Map, L. xliii, NW. Cf. Forrest's *Map of Lanarkshire* (1816)

past Wandel farm, here the Edinburgh turnpike, doubtless represents the Roman line. Three-quarters of a mile ahead, at the crossing of Woodend Burn, cuttings occur which have eased the gradient for an old road, though they have no characteristic Roman features.

For the next mile the Clyde valley is constricted between Dungavel Hill on the north and Devonshaw Hill on the south, until it widens towards Symington and the great bend in the river north-east of this village. The road forsakes the moorland for a while and enters cultivated country, through which recent field-work has revealed no traces. But all old accounts agree that the road aims at Biggar, a view that has now been confirmed by discoveries three miles further ahead (p. 37). Perhaps the spread of agriculture in the seventeenth and eighteenth centuries, acclaimed by the writers of the *Statistical Accounts* of the Clydesdale parishes,¹ is responsible for the early obliteration of the road hereabouts, for the descriptions of Maitland and Roy suggest that little remained in their time. Maitland has no more to tell us than that 'proceeding in a north-eastern direction to the town of Biggar, is the causeway that crosseth the moss at that place, and falls in with the fort near the church';² and little is added by Roy's statement that 'it has, doubtless, led still along the right bank of the Clyde to Biggar, but, excepting in crossing Biggar-moss, where its vestiges are discernible enough, no traces of it are particularly known.'³ The probability is that in the six miles from Lamington to Biggar and for three miles further north-east to the Candy Burn valley, the main road to Edinburgh, which was constructed as a turnpike about 1770,⁴ approximates to the Roman line. Over Biggar Moss, the water-parting between Tweed and Clyde, the road chooses a short crossing by the cottages of Causewayend, a name which perhaps preserves the tradition of the Roman road. The conjecture that a fort may have stood at Biggar is supported by the discovery of a Roman

¹ *Stat. Account*, vi, pp 76-7 (Culter Parish, 1793), *New Stat. Account*, vi, p. 833 (Wandell and Lammington Parishes, 1840), *ibid.* p. 372 (Biggar Parish, 1835).

² *Hist. of Scotland*, i, p. 193, cf Gordon, *Itin. Sept.*, p. 19, where we are told that at Biggar Moss the Roman military way 'is very distinct'.

³ *Milit. Ant.*, p. 104; whence Chalmers, *Caledonia*, i, p. 135

⁴ OS Maps, 1-inch scale, Scotland, sheet 79, squares E 10-B 13; *New Stat. Account*, vi, p. 818 (Wandell and Lammington Parishes, 1840).

coin.¹ From here an easy route leads eastwards to the Tweed along the Biggar Water, while a Roman road is described by Maitland as crossing the Medwin to the fort of Castledykes.²

FROM THE CLYDE TO THE NORTH ESK

(For maps see Plates XV and XVI A-D.)

Two miles north-east of Biggar the main road to Edinburgh approaches the Candy Burn and runs for a mile along this small valley. At the 24th milestone from Edinburgh the modern road bends northwards, but the accommodation-road to Brownsbank farm continues straight uphill. This lane, which once seems to have carried all the traffic (for the course of the main road to the west is a modern diversion to ease the gradient), passes along the east side of a plantation of firs. The small summit in the field to the left (L. xxvii, 15, 46) south of Young Cock Wood is a very suitable site for a signal-station. The area has long been under plough and no ancient features are now to be seen on the surface. As it approaches from the south, the Roman road appears to have inclined slightly to the east hereabouts, but it is only a little further on, to the north of Bucht Wood (L. xxvii, 15, 38), that traces of the causeway reappear. A faint mound could be traced in the Autumn of 1938 for half a mile across the stubble in field 19 south of the 23rd milestone, at about 90 paces distance from the modern road.

The Roman road can be followed across the side of the old plantation (ibid. 6) east of Paulyard, it runs along a steep northward-facing slope. Near the bend in the modern road south of B.M. 876.6 there is a firm flat causeway 6 paces wide, with cutting and embankment. At the next fence, the former boundary of the plantation, unploughed heather-

¹ See below, p. 114

² *Hist. of Scotland*, i, p. 194. 'The main branch of the military way from Biggar crosseth at a ford in the Maidwen-burn, about three miles north-west from Biggar, and passing the villages of Lampert, Renstruther, and the avenue leading to Lockart-house, runs through the station denominated the Castledykes.' Cf. Roy's suggestion (loc. cit.) of a possible road to Castledykes by Libberton.

The rectangular earthwork at Castle Plantation, 1½ miles south-west of Biggar (L. xxxiv, 13, 74), awaits exploration. In its present ruined state surface examination yields little information. Cf. Irving, *Journ. Brit. Arch. Assoc.*, x (1855), p. 13, No. 18.



Photo O G S Crauford

ROMAN ROAD SOUTH OF MELBOURNE, CROSSING MOORLAND EAST OF PAULYARD, LOOKING SOUTH TOWARDS
YOUNG COCK WOOD (IN DISTANCE)



Photo O G S Crayke

EENTH-CENTURY METALLED ROAD, WITH HILL-SIDE QUARRY, SOUTH OF HARDGATEHEAD, LOOKING NORTH-EAST
 39. The stones on left are in a typical eighteenth-century hillside-quarry. The mound of the Roman Road is
 visible behind the fence)

moorland is entered (*ibid.* 247), across which the causeway (Plate XIII) extends for half a mile towards Melbourne cross-roads, accompanied by a hollow-way, doubtless the medieval route, which runs in a curving course some yards to the west. The causeway is well preserved to a width of 5 or 6 paces until it reaches the arable field (L. xxvii, 11, 225) immediately south of the cross-roads, where it is worn down to a shelf. This straight course of a mile and a third from Young Cock Wood is quite certainly Roman, and its recognition as such carries with it the assumed route further south past Biggar and along the Candy Burn valley. At Melbourne cross-roads an old east-west route is passed, which connects mid-Clydesdale with the Tweed by way of the Tarth and Lyne Waters. This was perhaps the line of a Roman road from Newstead to the Clyde.¹

The Roman road along the south-east side of the Pentland Hills has been generally overlooked, for on the traditional view the Clydesdale road led from Biggar to Castledykes and thence to the west end of the Antonine Wall. Martland alone refers to 'the other [branch road] in a north-eastern [course] by the eastern end of Pentland-hills, in the neighbourhood of which it is to be seen pointing to the station at Cramond, on the southern side of the firth of Forth'.² The identification of remains of this road in 1938 throws new light on Roman road-surveying in relation to later routes. It may be observed that the medieval route from mid-Clydesdale to Edinburgh, like the corresponding Roman route, took advantage of the low ground between the Pentland and Moorfoot Hills,³ as also does the eighteenth-century road from Biggar to Edinburgh, which follows the Roman line very closely.

Between Melbourne and Dolphinton there is little evidence of the road. South of Melbourne it was aiming north-eastwards, and the prolongation of this line passes just east of the cross-roads. The road probably continued straight, for a hump, spared by agriculture, appears at the north end of field L. xxvii, 11, 370, and continues as a causeway,

¹ See below, pp. 57-9.

² *Hist. of Scotland*, 1, pp. 193-4, cf. Whyte, *Archaeologia Scotica*, 1 (1792), p. 307.

³ The importance of this route is shown by Gordon's map (on a scale of approximately 1 inch to 4½ miles) in his *Itinerarium Septentrionale*, where two roads are marked along the south-east side of the Pentland Hills. The western of these is doubtless the early metalled-road from Dolphinton by Hardgatehead and Medwyn House to Carlisle. Cf. Roy's MS. Map, sheet 6/3.

together with the hollow-way, across the site of the plantation (*ibid.* 371) beside the modern road. There are evident traces of the mound in the oak and beech grove (L. xxvii, 12, 356) by Townhead farm, and a cambered mound reappears on the same line across the boggy ground of field L. xxvii, 8, 336. At the farm of Bank, Roman objects have been found, of which a small bronze bull and a fibula of trumpet shape are precisely recorded.¹ The earthwork at Chesterlees (L. xxvii, 8, 228), a third of a mile to the west of the road, three-quarters of a mile north of Bank, is a native fort. Ahead, the prominent, steep-sided ridge of Carmaben Hill (P. vii, NE.) is a very suitable site for a signal-station, and the first part of the name is suggestive, but there are no traces of earthworks. The modern road prolongs the line through Dolphinton, and from the east end of the village the Roman road probably continued by Mabenbank across the Garvald Burn, where Peeblesshire is entered, to pass immediately south-east of Kippit Hill, for such a course falls into line with a long sector of the road to the north-east which is quite certain.

This sector begins in field P. vii, 4, 152, near the bridge carrying the main road over the railway, and extends for two miles to Hardgatehead. The first mile and a quarter was recognised from the air in June 1939, when the parched-grass mark of the Roman road was clearly visible. A ground survey in 1940 revealed faint traces across field 152, in line with a broad shelf on the east face of Sandy Hill². On the west side of field 159 there is quite a notable embankment 65 yards long, designed to carry a road 6 paces wide across a wet slack. The road is lost amongst reeds over another wet patch, and then traverses the north-east extension of Nick's plantation (*ibid.* 162) to pass the accommodation-road to Ingraston half-way between the farm and the main road to Edinburgh. There is a gentle ascent across the next five fields (P. vii, 4, 224, 223, 222; viii, 1, 295-6), which have all been ploughed and where little is visible on the ground. A low mound reappears towards the east side of field 295, where the wall is crossed 50 yards south of the angle. In the next rough pasture (296) the causeway becomes very plain; it is six yards in width,

¹ Irving, *Journ. Brit. Arch. Assoc.*, x (1855), pp. 16-17, and Pl. iii, Figs. 17-18, where these objects are ascribed, by mistake, to the farm of Bank north of Libberton, 7 miles to the west. Cf. Curle, *Proc. Soc. Ant. Scot.*, lxxvi (1931-2), p. 380, No. 48.

² Sandy Hill is scarred by old hollow-ways. Irving (*op. cit.*, p. 13) records a local legend about the Sandy Hill cuttings.

with a ditch on the north-west side. The grass-grown track that approaches from the left is a well-built metalled-road, forming a loop to the modern road for six miles from Loanend to Carlups. It is the old main road to Edinburgh which was in use in Roy's time,¹ and both it and the hollow-way accompany the Roman road for some distance, as they do so often further south. Beyond the marshy ground by the Springs the causeway is well preserved for 75 yards, when it is encroached upon and replaced by the hollow-way. There is a camber here of 18 inches; the side-ditches are worn into hollows. The mound of the Roman road continues across most of field 297, ascending from the Springs to a plantation of firs (P. v, 13, 485). The metalled-road here forms a broad shelf, to the west of which are small hill-side quarries of eighteenth-century type (Plate XIV). In the plantation-strip the Roman causeway is well preserved as a mound six paces wide; the hollow-way reappears beside it and partly destroys it. Traces are very faint in the next field (*ibid.* 484), but a quarter of a mile further on a short length of causeway is visible near Hardgatehead (*ibid.* 488). The Roman road continues north-eastwards, keeping a little below the grass-grown macadam track on the left. No signs remain in field 490, but the hollow-way, Roman causeway, and metalled-road reappear in that order from south-east to north-west in the next plantation-strip (*ibid.* 513). The causeway is six yards wide and 12 paces from the centre of the metalled-road. Short detached lengths of causeway are visible at intervals in field 522, and in the plantations by South Slipperfield Cottages, in the same position relatively to the metalled-lane. There is a descent to a stream, the West Water, and here the metalled-road makes a slight deviation to the north to cross at a bridge erected in 1620. It then returns to its former straight line, which probably coincides with the Roman road, of which no further signs are visible south of Lynedale.

The deep, steep-sided valley of the Lyne is much more of an obstacle than West Water. The crossing seems to have involved an S-shaped bend, for the Roman road probably passed immediately west of Medwyn House and, north of Lyne Water, to the east of Lynedale House. A cutting confirming the existence of an old route along this line occurs on the south bank (in field P. v, 9, 586) about 100 yards down-stream from

¹ Roy's MS Map, sheet 6/3.

the present bridge, and further observation in the grounds of the two houses might define the Roman road more precisely here. Well-worn hollow-ways are present east of a lane for the next half-mile up the ascent to Siller Holes (P. v, 6, 887), where old diggings are to be seen in a wood.¹ The crossing of the Lyne Water has involved a change of direction, for the road now runs north-north-east.

The Roman road diverges from the lane at the junction with the farm-road to Stonypath² and continues to ascend across field 883 to the plantation 855. From there the line of the causeway is quite certain across ground (ibid. 856 and 881) which, though now reverted to moorland, has once been under plough for a time, consequently the mound is somewhat reduced. It is about 90 yards up the slope from the metalled-road, from which it is separated by rough and rather wet pasture. The slight shelf that marks its course along the hillside is margined by occasional quarry-pits. Soon after field 856 is entered, the road bends through 10 degrees to the east, and for some distance maintains an altitude of 1100 feet. No greater height is reached in this sector, and the extensive view north-eastwards down the valley of the North Esk towards Dalkeith would make this an attractive position for a fortlet or signal-station.

At Fairslack farm the Roman road is carried across a gully on a causeway north-west of the Reservoir. A little ahead the road changes direction by some 15 degrees to the east and descends towards Carlops, taking advantage of the gentle slope along the crest of the ridge. North of the gully the causeway is well preserved for 200 yards where it crosses unploughed moorland, but it is lost through the old enclosures north of Waterloo (P. V, 2, 1008, 1005-4). It reappears near B M. 1015.3 between the metalled lane and a deep hollow, perhaps the eighteenth-century road. This sector requires careful study, for the ground has been disturbed by sand-diggings and is disfigured by a collection of semi-permanent caravans and their accompanying litter. The lane bends away to the right past the 'Old Sand Pits' to join the modern road near Hartside. Immediately above Hell's Hole (ibid. 1015), a morainic hollow opening into Carlops

¹ These are described in Macfarlane, *Geogr. Coll.*, vol. iii, p. 143, as 'the Silver Mines of Lead Law, half a mile above Linton, commonly called the Silver Holes'

² Known as 'Stainypath' about 1680.

Clydesdale led to this fort,¹ while the minister of Liberton parish at the end of the eighteenth century knew of its course near Comiston. 'And let it be observed,' he says, 'that the road here for near a mile is exactly cut out in the very line of the old Roman military way, and this was done on purpose by the direction of the late Sir John Clerk of Pennycuick, one of His Majesty's Barons of Exchequer, that most learned Antiquary. In levelling this road of late, were discovered several stone coffins, with human bones.'² Roy also reported a Roman road leading 'by Lonehead and Straton to Bowbridge, situated under the east end of the Pentland-hills. At this last place evident vestiges of it were to be perceived some few years ago, before the present turnpike road was made, leading through the old intrenchments, at the Buck Stone, and pointing by the east end of Bruce-hill towards a place called Mutton-hole, near the corner of Barnton Park wall. From thence to the station of Cramond, standing on the bank of the Forth, till of late years the traces of it were very entire, and may even now be discerned.'³ According to these accounts, the straight course of the turnpike from Hillend to Braid Burn marks the line of a Roman road which then diverged north-westwards towards Cramond. Certainly a road from Glencorse to Cramond that crossed the narrow neck connecting the Pentlands with their outlier, the Braid Hills, would be well sited in relation to the topography. Agriculture and building-development have probably removed all traces since Roy's time, for ground observation has failed to reveal any remains.

¹ *Hist. of Scotland*, 1, p 194, quoted above, p. 37.

² T. Whyte, 'An Account of the Parish of Liberton in Mid-Lothian, or County of Edinburgh,' *Archaeologia Scotica*, i (1792), pp. 308-9.

³ *Milit. Ant.*, p 103. It is on this authority that the main road at Bowbridge is marked 'Roman Road' on current Ordnance Maps (M. vii, NE.).

THE ROADS TO NITHSDALE

By J. K. St. JOSEPH

(For maps see Plates XIX, XX, XXII, and X B-C.)

The hilly region of Galloway embraces much wild country, including the highest mountains in the south of Scotland. On the east it is divided from the Lowther Hills by Nithsdale, which affords the easiest route from the Solway to the coastal plain of Ayrshire. In the period of the Roman occupation Nithsdale was connected with Annandale by a branch road set well inland to avoid the wide peat-mosses round the lower reaches of Nith, Lochar Water, and Annan, even now difficult to cross. Further north it was connected with the upper Clyde by a road which ran by the Durisdeer Pass down the valley of the Potrail Water to the Clyde near Crawford. A road up Nithsdale connecting these two roads is shown in Roy's MS. Map as part of a 'Roman road from Dumfries to Elvanfoot' (near Crawford). In his view that such a road existed he had been anticipated by Gordon: 'As there are but two Roads practicable for an Army to march from these Camps [at Burnswark] into *Clydesdale*, and *Dumbartonshire*, the one by *Moffat*, the other through the Valley of *Locher-Moss*, by *Dumfries*, and *Drumlenrig*; I am inclinable to believe he [Agricola] took the latter, viz. That by *Dumfries*, for a noble Roman military Way, has passed by all the above-mention'd Places, keeping to the right Hand of *Locher-Moss* and *Dumfries*, and is to this Day plain to be seen in several other Tracks of that Road, particularly a little to the East of *Disdeer Kirk*, where the Family of *Queensbury* lies interr'd, thence it runs over a great Track of high Mountains Two Miles to the East of *Entrioken Pass*, going through *Crawford Town*.'² In 1938-9 surveys were carried out on the ground and from the air to ascertain what traces still survived of a Roman road-system west of Annandale and upper Clydesdale.

In the account of the Annandale road it was conjectured (pp. 9-10) that the most likely crossing of the Dryfe lay near Dryfesdale Gate, and that thence the road probably ran along the ridge to Dryfeholm and

¹ Roy, MS. Map of Scotland (1747-55), sheet 5/5.

² *Itn. Sept.*, pp. 18-19, and map



Photo C G M. Atington

ROMAN ROAD, NORTH OF LOCHNABEN, REVEALED BY PARCHING OF VEGETATION, WITH NATIVE
FORT OF WOODYCASTLE IN FOREGROUND

Broomhills, where its course is certain. That hereabouts a road branched westwards from the Dryfeholm ridge is recorded by Roy. According to him, the road 'has passed the river Dryffe, below Dryffesdale church, not far from the junction of this river with the Annan; near which a branch [road] has departed from it to the left, taking the route of Nithsdale . . . This Roman way having crossed the Annan, then leads by a strong circular post, called Wood castle, and so by Murder Loch, Lane-gate, and Duncow, to Dalswinton, on the river Nith.'¹ This agrees with the *Statistical Account*, which places the junction at Gallaberry Hill. 'There are plain traces of the great Roman road from the border of England . . . to Dry'sdale gate, and up to the Gallaberry above mentioned, where it divided, one branch leading up through Annandale, by Moffat . . . the other branch crossing the Annan, touched an entire fort . . . called the Woody Castle'² To-day Dryfeholm is separated from Lochmaben by cultivated fields, while the low ground beside the Annan, liable to floods, is seamed with old river-channels—circumstances which explain why nothing was visible in 1938-9, either on the ground or from the air, in fields D. xlii, 16, 541-2, 545, and 518, nor are the parish boundaries of any help, for their straight course here is a relatively modern adjustment. The track that leads between fields 559 and 533 from Broomhill ford to the farm of that name runs on a wide causeway, and it may be that the ford marks the Roman crossing. Immediately up-stream the river divides, and it is unlikely that the Roman engineers would choose a route involving the passage both of the Annan and of the Kinnel Water.

According to Maitland, 'the military way proceeded by the western end of Burnswerk-Hill, in its course northwards, [and] a vicinal [Roman] way crosseth the country in a north-western direction; and crossing the road from Lochmaben to Moffat, about a mile benorth the former, goes on to the river Nid or Nith, and runs along the eastern side thereof.'³ In Roy's map of Annandale a 'Roman Way'⁴ is marked between Broomhill and Wood Castle, forming the southern boundary of a group of fields.

¹ *Milit. Ant.*, pp. 104-5. This is repeated in Chalmers, *Caledonia*, 1, p. 137

² *Stat. Account*, ix, p. 426 (Dry'sdale Parish, 1793)

³ *Hist. of Scotland*, i, p. 193

⁴ *Milit. Ant.*, Pl. xxv; cf. W. Crawford, *Map of Dumfriesshire* (1812).

The agricultural development this implies no doubt accounts for its almost complete disappearance.

The gully known as Broomhill Slack must be crossed before Marjoriebanks, on the road between Lochmaben and Moffat, is reached. From here to Lochhead an 'Old Road' is marked on the Ordnance Map. The line extends along the south side of the grass field D. xlii, 15, 385, where there is now a narrow, stony footpath ascending the ridge west of Marjoriebanks. The road is visible in the next pasture (*ibid.* 368) as a low causeway running nearly due west to the lane from Lochmaben to Elshieshields. There is a hump in both the hedge-bank and the macadam-surface, while a gate in the further hedge is set on the line. Across field 362 the cambered road-mound, 7 paces wide and 9 inches high, is well known to local farmers, it leads towards the railway, to disappear at the bank down to the railway-bridge.

The Roman character of this line was confirmed by aerial observation (Plate XVIII), and in August 1939 two trenches were dug across the causeway on Lochbank farm in field 362, 18 and 85 paces west of the north post of the field-gate. Both disclosed the metalling of a road; in the east

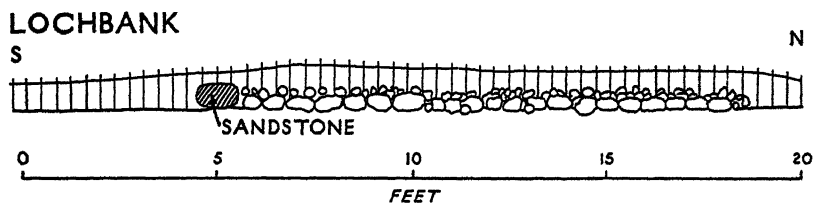


FIG. 2. CROSS-SECTION OF ROMAN ROAD ON LOCHBANK FARM,
NEAR LOCHMABEN

section (Fig. 2) a layer of 5-inch cobbles capped by smaller cobbles and gravel extended for a width of 15 feet. There has been much reduction by ploughing, especially towards the sides of the causeway, but a large sandstone block at the south edge possibly marked a kerb. The greyish-white stain of an old turf-line was visible in places between the road-metalling and the gravel subsoil. Extension of the trench for 9 feet

beyond the metalling revealed no side-ditch, a feature unnecessary for drainage in this sandy gravel. In the second trench the cobbles remained to a width of $14\frac{1}{2}$ feet, while no side-ditch occurred within 18 feet of the north edge. The road exposed in these sections agrees closely with Roman methods of construction and does not resemble the metalled-roads in Annandale and Clydesdale, nor does there seem to have been any early (post-Roman) road going west from Lochmaben, which lay on a north-and-south route from Annan to Moffat.¹

Where the 'old road' has been described as leading down to the railway south of Lochbank, it is shown in the Ordnance Map bending in an S-shaped curve across the hollow between Upper Loch and Mill Loch, but nothing is visible until field 357 is reached. Here faint traces of the causeway appear on the ground a little south of the Ordnance line, and Mr. O. G. S. Crawford reports that they were plainly visible from the air. The causeway is fairly distinct just within the north end of the pasture (formerly arable) 458, south of Lochhead cottages. No traces remain past Primrosebank, where there has been a change of direction, nor up the slope in the triangular field (460) to the west. The stony mound of the causeway is seen in the arable field 342 on an east and west line.² Near the west margin of the field it bends southwards into line with the hedge north of Broomrig. The remains in this field are faint, but visible both on the ground and from an aircraft and quite certain. The line continues as a shelf along the south edge of the next field (341) till the parish boundary is reached, but beyond this, on Hugh's Knowe, there are no traces. This length of $1\frac{1}{4}$ miles is all that has been identified of a branch road to Nithsdale from Annandale. Its winding course does not preclude a Roman origin: it is adopted to avoid the small lochs, some of them formerly of greater extent, that are a feature of the Lochmaben district, and it provides another example of the adaptability shown by Roman engineers.

Though the further course of this road westwards is unknown, it may be assumed that it led to a fort in Nithsdale, and the fort at Carzield³ is

¹ Roy, *ibid.*

² This part of the 'old road' is marked on the 1861 edition of the 6-inch Ordnance Map (D. xlii, SE.), but omitted in later editions.

³ See *Trans. Dumfriesshire and Galloway Nat. Hist. and Antiq. Society*, 3rd Ser. xxii (1942), pp. 156-63.

only six miles away. Modern communications take advantage of the Ae valley and pass round the north end of the Lochmaben hills, and Roy places the Roman road on this line, but his description reads as if he were stating a tradition rather than recording actual remains.¹ Other writers, attracted by the rectangular earthwork at Amisfield Tower, consider that the Roman road passed in that neighbourhood.² It seems unlikely that the road which has run due west from Dryfeholm to Broomrig will then have turned north-west to the Ae valley, nor need a route far to the south be considered, for Tinwald was anciently the lowest point at which the great expanse of the Lochar Moss could readily be crossed. The easiest route from Broomrig leads west-north-westwards up the slope behind Bankhead, thence between Hightown Hill and Pinnacle Hill³ round the north face of Bow Hill towards Carzield—a course that takes advantage of the low gap north of Hightown Hill and avoids a long passage across this difficult moramic country

Ward Law (p 117), which will doubtless have communicated by ferry with the west end of Hadrian's Wall, is cut off from east and west by the Lochar Moss and the Nith, but northwards it will have been in communication with Carzield by way of the long ridge extending to Dumfries. The brief indications of a road up Nithsdale given by early topographers are of little use in a search for existing remains. It may be that the spread of agriculture had caused its almost total disappearance as early as the eighteenth century. Recent surveys revealed no certain traces south of Durisdeer village. However, the identification as Roman of the earthwork there, by the Well Path, the recognition of a Roman road extending thence south-west towards the Nith for almost a mile, and the

¹ *Milit. Ant.*, p 105

² *Stat. Account*, i, p. 165 (Tinwald Parish, 1791), Chalmers, *Caledonia*, i, p. 153, *New Stat. Account*, iv (1834), p. 44, Stuart, *Caled. Rom.*, p. 235. The earthwork at Amisfield Tower (D xli, SE, *Inventory of the Royal Commission, County of Dumfries*, p. 199, No. 583) is certainly not Roman.

³ 175 yards south of the summit of Pinnacle Hill (D xlii, SW) is a rectangular earthwork which measures 56 by 49 paces over the rampart-centres. It has a decidedly Roman appearance in general, though there are no particular features conclusively Roman. The single entrance is in the west side, the angles are rounded. The north rampart is obscured by an old field-boundary. The hill-top (687 feet) commands a very extensive view and is a suitable site for a beacon. The fort on White Hill, three-quarters of a mile further south, is a native work.

identification of the forts at Carzield and Ward Law on the lower river, left little doubt of the existence of a Nithsdale road. Confirmation came in 1945, when air observation, verified by excavation in the following year, revealed a road-post of the Milton type at Barburgh Mill (p. 123), at the upper end of the Auldgirth gap, about $4\frac{1}{2}$ miles south of Thornhill.

The problems that confronted the Roman road-surveyors in Nithsdale were identical with those in Annandale. There is the same need in this broad valley to keep above the level of the river floods but away from the mountains and their possibilities of ambush; and it may be conjectured that the surveyors arrived at a similar solution. The modern road and railway which pass through the Auldgirth gap and then lead by Closeburn and Thornhill to the Carron Water follow as good a tactical line as any, providing an easy approach to Durisdeer, where definite traces of the road are known. Whether the eighteen-mile interval between Carzield and Durisdeer was guarded entirely by block-houses like that at Barburgh Mill, or whether there was also a fort, remains uncertain. Ten miles north of Carzield the plateau by Thornhill lies centrally within the valley, commanding every route to north and west in a way that would commend it to Roman engineers¹

'Near Durisdeer,' Pennant records,² 'is said to be a small Roman fortress: the Roman road runs by it, and is continued thence by the *Well-path*, through *Crawford* moor, to *Elven-foot*, has been lately repaired, and is much preferable to the other through the mountains.' This route seems to have served as the main line of communication from upper Nithsdale to the Clyde until comparatively recent times. That it was chosen in preference to Dalveen Pass, which is 250 feet lower at the waters-parting, is perhaps due to the more gradual ascent. In the Dalveen Pass it is hardly possible to ease the climb above Upper Dalveen without cutting into the steep hillside after the manner of the present

¹ There is nothing to support the view, first advanced by Gordon, that there was a Roman fort at Tibbers Castle, Drumlanrig, on the west bank of the Nith (*Itin Sept.*, p. 19, cf. Martland, *Hist. of Scotland*, i, p. 193, Roy, *Milit. Ant.*, Pl. xlix, though in the text (p. 105) this name is attached by a slip to the Durisdeer fortlet, whence Chalmers, *Caledonia*, i, p. 137, note (p), and p. 154, and Stuart, *Caled Rom.*, pp. 235-6). Nor is the earthwork on Eccles farm (D. xxi, NW.; *Royal Comm. Inventory, County of Dumfries*, p. 183, No. 527) Roman in origin, as has been claimed.

² *A Tour in Scotland, etc.*, 1772, p. 112. Cf. *New Stat. Account*, iv, p. 327 (Durisdeer Parish, 1835)

road¹—a task hardly likely to be undertaken in so remote a district, when another route was available. In the choice of the more direct but much narrower pass of Durisdeer the Roman road was followed by the hollow-way, the representative of sixteenth and seventeenth-century communications, as well as by the first carefully built road in these parts—that constructed by the Dukes of Buccleuch in the late eighteenth century,² which carries the modern track along the east slope of the valley in a series of cuttings.

The straight road from the Carron Water to Durisdeer is in line with the Roman road where this appears beyond the village as a low mound leading into the narrow pass through the centre of the meadows (D. xiv, 11, 350-1) beside the Kirk Burn. At the first field-boundary there is a slight change of direction to the east. The third meadow is entered 60 paces east of the stream. Across this field the road is very plain, forming a grassy causeway six paces wide, which leads to the stream-crossing at a point where two rivulets, Glenbo and Dash Cleuch, enter the Kirk Burn. Stones of the road are visible where the stream has eroded the causeway. The road then sweeps up the spur, and, bending to the right, takes advantage of a slight shelf that passes immediately south-east of the Roman fortlet. The mound has been considerably worn by a modern farm-track on the same line, but Mr. Clarke's excavations showed a spread of gravel to remain above the rock³

The narrow part of the pass is now approached. 350 yards north-east of the fortlet the Well Path,⁴ to use the old name for the road, bends northwards in conformity with the trend of the valley, the view ahead is

¹ This road was constructed towards the close of the eighteenth century. Cf. *Stat. Account*, iv, p. 463 (Durisdeer Parish, 1792). It is marked on Crawford's *Map of Dumfriesshire* (1812) and, apparently, on Ross's *Map of the Shire of Lanark* (1773), but not on Roy's MS. Map of about 1750.

² Inglis, *Proc. Soc. Ant. Scot.*, lviii (1923-4), pp. 218-20. This is one of the earliest dated macadam roads hereabouts, and it forms a useful comparison with Roman work.

³ See p. 125. There are traces about 35 yards north-west of the fortlet which may represent an alternative line. They were difficult to follow in the rough grass.

⁴ Perhaps better 'Wall Path', which is the spelling in Roy's MS. Map of 1750 (Wall Strand), in the *Stat. Account*, iv p. 463 (1792), and in the *New Stat. Account*, loc. cit. See also Inglis, op. cit., p. 218.

very restricted. The Roman road has been utilized as a cart-track, and the point-to-point course is obscured ; it keeps about 40 yards west of the Kirk Burn. $1\frac{1}{2}$ furlongs further on, the view opens up towards the head of the pass, and here the modern track bends eastwards to the stream, but the Roman road keeps straight on, forming a well-preserved, cambered causeway for 400 yards, until Glenhourie Burn (D. xiv, NE.) is passed. A gap of 250 yards follows, where the stream in its meanderings has spread over a wide area and destroyed all traces. The mound reappears a little south of the oblique angle in a wall opposite Stony Cleuch ; at the angle the road lies wholly to the east of the wall for a few yards, then crosses the wall again and soon begins the steep ascent for the last third of a mile to the summit of the pass. The valley here is seamed with the zigzags of early tracks and old water-courses, amongst which it is difficult to disentangle remains of the Roman road. The much eroded causeway along the foot of the steep north slope, with a small zigzag below Wee Well Craigs, is the most likely line. The mound is clearly artificial and shows much rough stone placed like layers of metaling, where cross-sections are exposed in drainage-channels. The line approaches the wall some 90 yards from the summit, at the same point as the eighteenth-century road, which has been maintained at an easier gradient by cuttings along the east side of the valley. Above the source of the rill that forms the head-waters of the Kirk Burn the ground flattens out and the head of the pass is reached at 1330 feet, the fence here forming the boundary between Dumfriesshire and Lanarkshire. Northwards lies the valley of the Potrail Water, along the west side of which the road leads to the Clyde, as described by Roy : 'From this place [Durisdeer] it keeps along the left bank of Potrail Water, to its junction with the river Daar, proceeding down the last mentioned river to its conflux with the Clyde'.¹

For the first mile of the descent round Well Hill little remains of the Roman road, for the same line has been followed by the hollow-way, which is deeply worn into the hill-side. Durisdeer Lane (L. liii, SW.), the name of the stream that rises east of the watershed, seems to preserve an old tradition of this route. 400 yards past the summit a short length of causeway begins on the up-hill side of the hollow-way, at the point where

¹ *Milit. Ant.*, p 105 ; whence Chalmers, *Caledonia*, i, p. 137.

where the width is some six paces. A wall is passed 56 yards west of the cottage, where a hen-house stands on the shelf formed by the road, and the line continues across the large pasture L. lvi, NW., 725,¹ to the gate in the north wall. Large stones of the metalling are visible a little further on, but the causeway is sunk in the wet ground as the main road is approached near an old gravel-pit 300 yards beyond the gate. The Roman road passes obliquely beneath a wall immediately beyond the main road, the mound is very low here and partly lost in reeds, but the causeway reappears 200 yards ahead and continues to Potrenick Burn² along the west edge of a field below the field-wall and an earth dyke.

For the next three miles the course lies two or three hundred yards west of the Potrail Water. The gradient of this valley is very slight; not till Nether Fingland is reached does the road drop below 1000 feet for the first time since Durisdeer, while $2\frac{1}{2}$ miles ahead, at Glenochar, the altitude is still 920 feet. Short detached sectors of the Roman road remain where it cuts across loops in the main road. The Roman road and the hollow-way usually occur side by side, but there seems to be no equivalent of the metalled-road of Clydesdale. In spite of the obliteration of much of the older work, it is quite certain that this is the Roman line. At several places the dimensions and construction of the causeway can be examined, and these agree with Roman standards, while existing remains fall into a number of short, straight sectors which control the modern lay-out and preserve a point-to-point alinement so characteristic of Roman roads.

The road was clear in 1940 for 80 yards between the Potrenick Burn and the main road, being marked by a line of parched grass. The causeway reappears cutting across the next loop, where it is in good order, six yards in width, at both ends a cross-section of the metalling is visible in gravel-diggings. The main road then coalesces with the Roman line for a short distance, but the causeway is seen again for 200 yards forming a chord across the loop south of Nether Fingland (L. l, SW). At the end of this length a small gravel-pit just cuts into the line. Past the farm the modern road occupies the site, and hereabouts there is a change of direction through a few degrees to the north. Two more lengths appear on the west side of the main road between Nether Fingland and Little

¹ Field number taken from the 6-inch sheet, Lan. lvi, 1st ed., 1863

² Procrenock Burn of Roy's Map

Peden Burn, half a mile ahead. The polygonal enclosure (south corner of field L. 1, SW, 660) north of the burn is the site of Pedan farm marked in Roy's map. There is a further change of direction through some 10 degrees, and the Roman causeway is visible again opposite the north end of field 660. A few quarry-pits occur on the left-hand side. The mound continues for a quarter of a mile towards Peden Burn, its straight course contrasting with the gentle bends in the main road 30 yards to the east. North of the road to Peden Reservoir the line of the causeway is very evident for 120 yards, for the modern road has cut into the east half of the bank and many large stones of the metalling are exposed. The modern road gradually converges with the line. Round the next loop all Roman work has been destroyed by river erosion. There are few traces for half a mile until a road-junction is reached, but the main road preserves the Roman line, which has been designed in two short sectors. Some yards north of the road-junction the causeway reappears at the road-side and gradually diverges to the west, it aims almost due north. The line soon passes beneath the tip from Glenochar slate-quarry (L. 1, SW.). Beyond the approach to the quarry faint traces are seen across broken ground, and there is a short length of causeway well preserved over the brow opposite Glenochar farm, leading down to the burn some yards west of the modern road. The crossing of the Glenochar Burn lay immediately above the bridge and has been destroyed by erosion, but beyond the burn the causeway is entire, forming a chord to the next bend in the main road. A complete section of the road-metalling is exposed on the north bank of the stream, where large sandstone blocks are visible.

The modern road now leaves the Roman line for $1\frac{1}{2}$ miles while the latter climbs round the east side of Watchman Hill. For the first part of this interval it is accompanied by the hollow-way, the course of which is marked on the first edition of the Ordnance Map. From Glenochar Burn a straight course of a third of a mile leads to the junction of the two streams that unite to form the Annanshaw Burn. At first the causeway is lost across the marshy ground on the gentle slope beside the main road, and the line then ascends to pass west of an old quarry. The hollow-way encroaches on the line of the Roman road (Plate XXI), which it then follows in a parallel course 15 yards to the east. The causeway continues in fine order, five or six paces wide, though cut through by two old quarries



Photo O G S Crawford

STREAM-SECTION THROUGH CAUSEWAY OF ROMAN ROAD, WHICH HAS BEEN WORN DOWN ON THE LEFT BY A
HOLLOW-WAY (MARKED BY REEDS), NORTH OF GLENOCHAR

and lost in disturbed ground as Annanshaw Burn is approached. Beyond the burn the road forms a hump beneath the west wall of an old sheepfold. Near here the old hollow-way (marked 'Roman Road' on the 1863 Ordnance Map) diverges to the east. A broad shelf overgrown with bracken continues up the hill-side, and near the summit a row of quarry-pits appears on the left, the slope below is covered with a number of irregular cultivation-terraces. A hollow-way reappears on either side of Air Cleuch; the age-relationship of the two roads is very clear here. Embankments occur beside the stream, which the Roman road seems to have crossed on a (wooden) bridge. The road curves eastwards to pass round the flat shoulder between Knock Fessock and an old quarry. From the shoulder the course of the Roman road in Clydesdale is visible to Little Clyde.

For the first few hundred yards the cambered mound of the causeway is in perfect condition, and stones of the metalling show beneath the grass-grown track. The road is carried across a wet hollow on a small embankment, and here more quarry-pits appear on the left. There is a curve northwards and a relatively steep descent. The road forms a shelf, partly cut into by the hollow-way, passing below some old terrace-cultivations south of Wood Brae, and is then rejoined, as the modern road is approached, by the 'Roman road' of the 1863 Ordnance Map, now a long abandoned cart-track. The Roman causeway is cut through by the hollow of the old road, which then accompanies it for 230 yards. The modern road is reached opposite Bucht Knowe, where a field-boundary approaches from the east. The Clyde is only 80 yards away, and on the far side of the valley is the Roman trunk-road, from which the road to lower Nithsdale separated at Dryfesdale gate.

From the junction with the Clyde, Roy takes the road 'by Elwin Foot, to Crawford Castle, near which place it appears to have passed the Clyde, and united with the Annandale Road.'¹ This curious arrangement by which the roads run on parallel courses for three miles on opposite sides of the river was no doubt designed that the river-crossing might be guarded by the fort, and is logical enough. The low mound of the road is visible across field L. 1, NW., 569 (formerly arable), but there are no traces on this line in the next two fields (L. xlvii, 14, 360a and 361). The

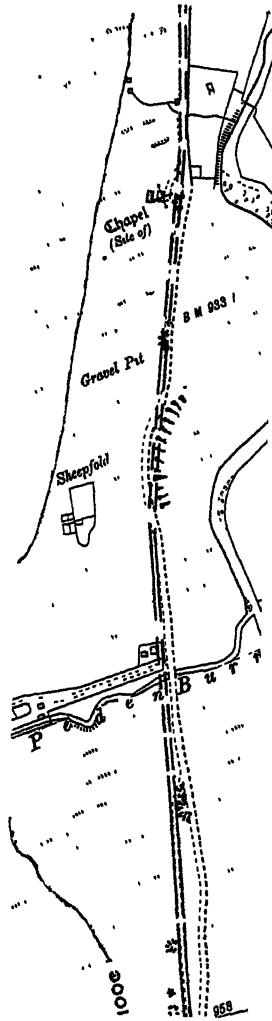
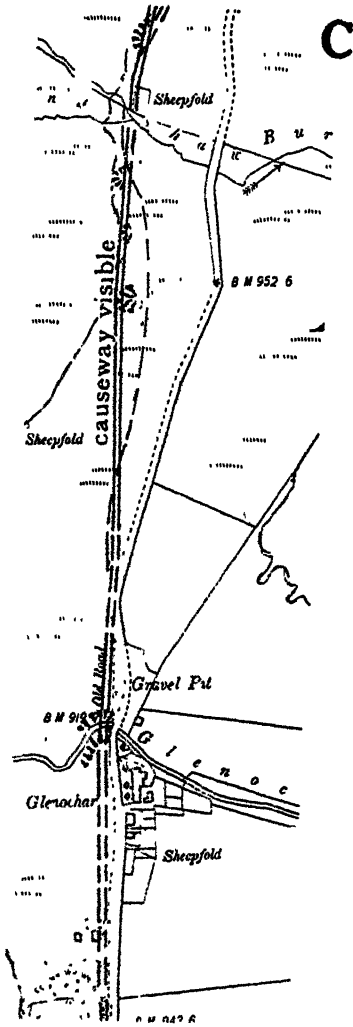
¹ *Milit. Ant.*, p. 105; whence Chalmers, *Caledonia*, i, p. 137.

railway is crossed 150 yards south-east of Elvanfoot station, and the road reappears by a streamlet known as the Babbing Well, which runs down the middle of the causeway. The mound continues north of the angle in the stream along the foot of a small bank. This is the line of an 'old road' marked on the Ordnance Map, but presently the track of the latter can be seen diverging westwards (*ibid.* field 359). No certain signs occur for two-thirds of a mile. North of the cottages at Hall a metalled-road along the top of the steep river-bank seems to mark the Roman line. If this be so, the Roman road probably changed direction sharply to the north-east about a point where a house stands on the main road west of the railway. The shelf which runs north-eastwards from this house through a fir-plantation, to reappear beyond the railway-cutting at the west margin of Shepherd's Wood (*ibid.* 324), represents an earlier course of the main road, with which it merges. It seems to mark, too, the Roman road, for, while the modern road bends eastward a furlong ahead, the Roman causeway continues the line of the shelf. It can be traced for 150 yards towards Collins Burn, where it has been eroded away, a large part of the south bank of the stream having been removed, leaving a steep scarp. The 'old road'¹ that runs through the centre of Shepherd's Wood and into the field (*ibid.* 314) to the north is a metalled forerunner of the turnpike, quite distinct from the Roman line.

From Collins Burn the causeway, six yards wide, is well preserved for 350 yards through the rough pasture L. xlvii, 10, 313, to a small summit, 900 feet high, by the bend in the main road. In typically Roman fashion the road turns at the summit through 25 degrees to the north. Traces of the causeway are visible, 20 or 30 yards west of the modern road, for a third of a mile to the end of the next field (*ibid.* 292). Quarry-pits, some 15 feet in diameter, occur on either side of the causeway at the north end of this sector, a useful confirmation of the character of this road at the last point at which it is visible. No further traces remain in the fields by Stoneyburn or through Crawford village, but no doubt the road continued on the west bank of the Clyde to cross that river by a ford or bridge guarded by the fort at Crawford Castle (pp. 113-4), 1½ miles ahead.²

¹ Marked 'Roman Road' on the 6-inch sheet L. xlvii, SW., 1863 edition.

² The junction of the two roads was placed at Crawford Castle by Rev. *Milit. Ant.*, p. 105; whence Chalmers, *Caledonia*, i, p. 137.



FROM TWEED TO CLYDE

By J. K. ST. JOSEPH

(For map see Plate XXIII)

The fort at Lyne¹ would be intended to secure the hilly country lying between the east and west roads through southern Scotland, and, like the forts on these roads, would be intended to control a line of communication, presumably one running up the valley of the Tweed from Newstead. The situation of the fort on the Lyne Water, nearly a mile north of the Tweed, seems to imply that hereabout the road which it controlled left the valley of the Tweed to follow that of the Lyne Water. The existence of a large fort on the Clyde at Corbiehall (Castledykes), some 16 miles to the north-west, indicates that from the Lyne Water the road, or one branch of it,² would pass north of the Broughton Heights by the valley of the Tarth to mid-Clydesdale. This line has attracted road-builders of other periods, for it has been used by medieval and modern roads from Tweed to Clyde. Possible traces of a Roman road occur at a number of points, but they still await confirmation by further examination of the ground and by excavation.

A 'Roman road from Kirkurde to Peebles' is marked on Roy's plan of Lyne³ to the north of the fort; this and 'the traces of a paved road' mentioned by Stuart seem to be the authorities for the 'Remains of Causeway (supposed Roman)' of the modern Ordnance Map.⁴ In the course of a survey in November 1938, Mr. O. G. S. Crawford noticed the causeway of an old road forming a shelf along the hill-side opposite Drochill. It begins near the seventh milestone from Peebles and runs westwards for

¹ Excavated in 1900. See *Proc Soc Ant. Scot.*, xxxv (1900-1), pp. 154-86

² It is suggested below (p. 116) that a branch may have continued along the valley of the Lyne Water to join the road running south-east of the Pentlands about Carlops

³ *Milit. Ant.*, Pl. xxviii

⁴ O.S. sheet, Peebles XII, NE. Cf. Stuart, *Caled Rom.*, p. 152. In *Stat. Account* XII, p. 564 (Lyne Parish, 1794) the traces of the road are said to lead through the glebe

three-quarters of a mile, some 150 yards south of the main road.¹ The hollow tracks of a number of old roads cross the grounds of Castlecraig to the west of the House (P. viii, 13, 78), while a straight east-west road commences at Kirkurd school, descending past Harestanes to Bryland Burn. At the next ridge it crosses the County boundary. Though Roy does not mark it on his MS. Map of Scotland, this road from Lyne to Clydesdale is clearly a very old route, and practically all of it remains in use to the present day as the road to Glasgow from Tweeddale.

A low causeway, 5 to 6 paces wide, which may well be the Roman road, begins in Corsincon Wood beside the fence at B.M. 917.6 (L. xxvii, SE.) on the north of the modern road. Westwards it cuts across an S-shaped bend in the modern road, becoming slighter towards the County boundary, where it is accompanied on the north by a short length of deep hollow-way. Near the south-west corner of the next plantation north of the road (L. xxvii, 12, 371) the causeway reappears,² and can be followed across field 370 and a young plantation towards the Edinburgh road a little north of the cross-roads at Melbourne.

The modern road continues west to Henburn, beyond which it makes a curving detour to the south by Elsrickle and Gillburn. Roy's MS. Map, however, shows a track continuing the Melbourne-Henburn line by Lammerlaw and Harecairns to Countyhall,³ and the shelf of an old road can still be traced on this line from the point where the modern road leaves it, near Howburn, up the lane past Walston school to Harecairns. Between the school and Crawcraigs, a well-preserved causeway, one furlong long, cuts across a loop in the modern road, it is 6 yards wide and closely resembles the mound of Roman roads elsewhere, except for a rather sharp bank on its south side. In cutting across the loop it runs through the north end of the field L. xxvii, 10, 187, passes beneath the stone boundary-wall and crosses the site of a plantation (*ibid.* 186) cut down some 20 years ago. Here there is a small summit to the south, nearly 1000 feet high, which commands a wide view westwards, extending

¹ Through fields P. xii, 2 (Stobo parish), 14, 6 and 7.

² The fence that forms the west boundary of the plantation humps over the mound.

³ Roy's MS. Map, sheet 6/3; cf. O.S. Maps, 1-inch scale, Scotland, sheet 79, A12-13.

on a clear day down Clydesdale far beyond Castledykes. No better place beside the road could be chosen for long-distance signalling, and a rectangular earthwork 120 yards south of the causeway may have been a fortlet or a signal-station. The existing remains consist of a length of bank, 12 or 15 feet wide, and an accompanying ditch, which form the whole of the west side, 50 paces long, and part of the north side of an earthwork which may have measured some 150 feet square over the rampart-centres. The south and east ramparts appear to run beside the boundary-wall of the plantation. The remains are too ruined for their age to be determined by surface inspection, and a decision on their character must await a test excavation.

From the lane-junction a third of a mile to the west, beyond Harecairns, a series of cuttings continues the line west-north-westwards down the slope to Gill Burn, to rejoin the modern Elsrickle-Newbigging road at a bend. A deep cutting occurs west of the lane-junction south of Newbigging Station (in field L. xxvii, 9, 1918), and suggests that the further course of this old road lay towards Carnwath Mill, but nothing is now visible on this line. In the six miles between Newbigging and Castledykes fort (p. 127), consisting of country that includes many hummocky sand-moraines and has largely been ploughed, remains of a Roman road are unlikely to be preserved.¹

¹ Traces were apparently known to the writer of the account of Carstairs parish (1796) in *Stat Account*, xviii, p. 180, where it is said that 'the causeway to and from the camp is visible, running in a direct line, and can be traced for many miles.' Cf. *New Stat Account*, vi (1839), p. 553.

THE AVONDALE ROAD

By. J. K. ST. JOSEPH

(For maps see Plates XXIV and XXV.)

This road leads from mid-Clydesdale westwards towards the Ayrshire coast. It follows the valleys of the Avon and the Irvine Water, crossing near Loudoun Hill the low gap in the hills which forms the watershed between these streams. It was discovered by Roy, who marks it in his MS. Map and gives this description of it in his *Military Antiquities* ¹

Besides these branches just now described, belonging to this western communication of the Romans, in treating of Agricola's motions, we have had occasion to remark another, which hitherto seems to have been wholly unnoticed by antiquaries. It was probably intended to lead from Lanark, or perhaps the station at Castle-dykes, near Carstairs, by the gorge of Loudon-hill, into Ayrshire. It may have passed the Clyde near Lanark bridge, a little way below the Castle-hill, which is no doubt a Roman fort. Thence it probably led over Stonebyre-hill towards Corro mill, about which place it is likely that it passed the river Nethan, leaving Craig-Nethan castle, a strong ancient post, about half a mile on the right, but in this part of its course no certain traces of it are now to be seen nevertheless, on the west side of Nethan, in Draffan-crofts, vestiges of it are every now and then discovered by the plough. It has crossed Caner burn at the Gill, and here it becomes very visible, leading by Tan-hill, along the north side of Blackwood inclosures, to a rising ground called Din's-hill. Thence it passed to the south of Hazleden crossing Kype Water at Sandysford, and so along Avondale, by Welslev, and Westling-bank, towards the gorge of Loudon-hill but in this last part, as well as in its after course through Ayrshire, no existing traces of it have been heard of. There is reason, however, to believe, that it led, at least, as far as Ayr, and was undoubtedly a very necessary communication from the centre of Clydesdale, into the south-west parts of Scotland ²

Since Roy's time agriculture has continued the obliteration of the road, so that little is now visible. The line, however, is certain from Draffan to Linbank, while its Roman date and course westwards into Ayrshire, as conjectured by Roy, have been confirmed by the rediscovery

¹ *Milit. Ant.*, p. 106, with Pl. 1, MS. Map, sheet 5/3. See also Ordnance Maps, 1-inch scale, Scotland, sheet 79, squares A4-B1, where it is marked as 'Ancient Road'.

² This description is drawn upon by the writers of the *Statistical Accounts* and by Chalmers, who add little fresh information. See Chalmers, *Caledonia*, i, p. 138; cf. Stuart, *Caled. Rom.*, pp. 258-9.

of the supposed 'camp' at Allanton, near Loudoun Hill, and its identification as a Roman fort (pp. 188 ff.).

The first known sector of this Ayrshire road, by the Gill farm (L. xxiv, SE.), points north-eastwards towards the nearest part of the Clydesdale road some six miles away at Carluke, but local tradition favours a more southerly line. Perhaps the main Clydesdale road was joined at Castledykes fort (pp. 127 ff.), centrally placed in the Clyde valley at the meeting place of natural lines of communication, like its modern counterpart, Carstairs railway-junction.

No traces have been found by Lanark¹ nor over Stonebyres Hill; the country here is difficult and has been much cultivated. The crossing of two such deep valleys as the Nethan and the Clyde would hardly appeal to Roman engineers, though there are points of relatively easy passage, as at the modern Clyde bridge west of Lanark. The 'vestiges' on Draffan-crofts known to Roy, which probably lay in the fields south of Draffan, have now disappeared, but definite remains of the road occur south of Canderbank Cottage in field L. xxiv, 15, 617, beside the main Lesmahagow-Larkhall road. There a cutting 8 paces wide and 37 yards long with a maximum depth of 4 feet leads down to the stream. On the far bank all traces are destroyed by modern digging at the north end of a small copse. The straight line continues through two small fields (ibid. 712 and 709) to cross the railway west of the culvert over Cander Water by Gill farm, which stands on the course. The flat shelf of the road continues along the south side of a meadow (ibid. 700), within the next arable field (L. xxiv, 14, 699) a slight hump occurs by the hedge, but ploughing has removed all further traces. The field (660) south of Tanhill, though under grass in 1938, has been extensively ploughed, and a slight ridge is all that remains of the causeway.

Plantations and field boundaries mark the line for the next two miles to the west-south-west. The narrow belt of trees (ibid. 664) that begins west of field 660 is just the width of the causeway and indicates its general course while obscuring all details. In places the cambered mound, 6 or 7 paces wide, can be seen amongst trees and undergrowth, while large stones appear beneath tree-roots and in fence-dykes. The south side-ditch is

¹ Little can now be made of Lanark Castle Hill, claimed by Roy (loc. cit.) as the site of a Roman fort. Cf. *New Stat. Account*, vi, p. 13 (Lanark Parish, 1834).

visible near the west corner of field 658, passing gradually within the wooded belt. At the margin of Loch Wood¹ (ibid. 665), immediately west of the meeting of several old fence-lines, a short length of the cambered mound of the road is seen, with a side-ditch 4 feet wide at its north edge. For the next quarter of a mile the road is thickly overgrown with heather and brushwood, though stones of the causeway are visible from time to time in a modern bank.² An old drive is crossed obliquely, and the road then runs along the south side of a fence. The ground here is reverted arable land, with a growth of birch, heather, and moss, and few traces of the road appear. Half-way across this enclosure (ibid. 362) a hollow may mark an old quarry-pit, while at the west corner big stones of the causeway are visible. The descent to a small brook has begun; the narrow plantation-strip (ibid. 341, 361) on the north preserves the ends of some very large plough-ridges. An old lane, thickly overgrown, is passed, and the road runs along the north margin of a thick pine-wood (ibid. 340) to be continued as a stony bank, part of a head-rig, at the edge of an arable field (342). The causeway is plain beyond the small brook, ascending the slope at the north edge of the next field (ibid. 343). Its width is about 5 paces, with the centre $5\frac{1}{2}$ yards south of the hedge. An unploughed belt of waste grass remains along the side of the field, but the south edge of the causeway has been encroached upon by the plough and stones disclosed. Paving was seen in 1938 south of a gate through the hedge, and hereabouts, in the grass field on the north (ibid. 344), a few old hollows seem to be ploughed-in quarry-pits. Nothing is visible in the next arable field (345), beyond which the lane to Dykehead is reached.

This part of the road is described in the *New Statistical Account* of Stonehouse parish as 'the old Roman military road from Ayr to Edinburgh, which runs through the parish, commonly known to the country people by the name of the Deil's Causey, from some superstitious notion they entertain that the personage alluded to had a principal hand in paving it. This road, in some places, is still entire, very rudely paved with large stones; in other places, it has been completely erased by the

¹ The 'Blackwood inclosures' of Roy. This part of the course is marked 'Roman Road' in the 1864 edition of the 6-inch sheets (L. xxiv, SW.).

² This seems to be the sector referred to in the *New Stat. Account*, vi, p. 33 (Lesmahagow Parish, 1834), where it is said that 'an old Roman road, which passed through a corner of the parish, has been obliterated by the plough.'

country people, for the purpose of draining, building fences, making roads, etc.¹

West of the lane the Roman road crosses a heath (333), formerly woodland. Here the causeway is plain, with a width of 7 paces, occasional large stones are seen. Near the lane the low mound is cut through by hollow-ways which are clearly later than it. A change of direction through 5 degrees to the north is made, in typically Roman fashion, at the highest point, 30-40 yards west of the lane. A broad stony strip of waste grass remains unploughed along the north edge of the next field (L. xxiv, 13, 217), marking the line of the road, though the mound is quite lost. South of Chapel Farm no traces remain, the field boundaries here do not follow the Roman line, and the metalling has no doubt been deliberately removed to facilitate ploughing. This is the sector referred to by Stuart in his statement that 'in the parish of Stonehouse, the elevation of the ancient causeway is to this day very perceptible, especially in the neighbourhood of Chapel-Farm, where, in several places, it traverses the tilled land, leaving a broad ridge of uncultivated ground.'²

Beyond a side-road the line continues along the north edge of a plantation (ibid. 213). The road reaches the highest point of its course on this summit (780 feet), and a wide view can be obtained westwards along Avondale to the prominent peak of Loudoun Hill. No definite traces occur for 240 yards west of the side-road. From this point the road crosses an arm of the plantation, within which the causeway forms a low, grassy mound 7 paces wide, with a side-ditch on the south. Large stones of the bottoming are visible in the final plantation-strip (ibid. 191), but there are no signs across the next field (210). At the bend north of Boag farm the modern road from Blackwood to Sandford takes up the Roman line and follows it as far as the northward bend to Sandford by Tweedieside farm. Thence the Roman road will have continued without deviation through the fields to the south of Sandford across the Kype Water. After three-quarters of a mile the modern road returns to this line at Craigmuir (L. xxx, NE.). For the next two miles to Cauldcoats the road runs along a fairly level ridge half a mile south of the Avon, but apart from the alinement there are no evident Roman features. The

¹ *New Stat Account*, vi (1836), p. 472.

² *Caled. Rom.*, p. 259.

fields beside the Kype Water have long been cultivated, while west of Craigmuir the existing road obscures all traces. Only at Burnbrae burn, where cuttings are visible on both banks in the field (L. xxx, 4, 1190) south of the road and an old quarry-pit measuring 5 yards by 9 occurs to the north (field 1143), and at Walesley, where an old rush-grown hollow remains in the plantation north of the road, are there signs of ancient usage. The summit (709 feet) north-east of Cauldcoats affords a good view of Avondale. Near this point the existing road bends northwards. South of the bend there has been some modern digging, while a number of hollows at the north-west corner of the same field (L. xxx, 7, 1701) resemble old quarry-pits.

No signs of the road remain in the fields to the west, nor on the banks of the Lochar Water (L. xxx, NW.) Probably the road continued in the same line to West Linbank, as described by Roy. This part of its course seems to have been long destroyed, no doubt owing to the early progress of agriculture hereabout, and little help is given by the older accounts, such as that in the *New Statistical Account* of the parish of Avondale, where we are told that 'a Roman road can be traced for a considerable distance in the parish. It runs along the south side of the Avon, and passes the farm of Walesley. On the farm of Gennerhill some shoes or sandals of Roman manufacture have been found, and also some small coins.'¹

For four miles from West Linbank to the fort at Loudoun Hill (L. xxx, SW. , xxix, SE) no traces of the road have been noticed. The Roman engineers will probably have avoided the marshes in the flat valley of the Avon Water and have crossed the river where solid ground afforded a suitable passage as free as possible from floods. Some such point as the site of Ryeland Bridge would offer a suitable crossing, and the further course may have followed fairly closely the main road past Drumclog. Certainly this is an old line, for early metalled-roads and hollow-ways can be traced beside the existing road, as at Allantonplains (A. xx, 13,

¹ *New Stat. Account*, vi (1835), p. 303. Cf. *Stat. Account*, ix, p. 394 (Avondale Parish, 1793); Stuart, *Caled Rom*, p. 259. Gennerhill is represented by the name Gainerhill, by which the present farm is known.

1348), and this route passes not far from Torfoot, where a hoard of Roman coins was found in 1803 in a field (L. xxx, 9, 2750a) of the north farm.¹

The course of the road near the fort on 'The Beg' by Loudoun Hill is not clear. Possibly the stones and grit visible to west of the modern road-junction at the foot of the narrow ridge that leads to the east end of the plateau mark a causeway serving a gate in the south-east rampart. But there must also have been a by-pass along the small valley, for the plateau is barely wide enough for the fort itself. Nor does the track that curves away from the north-west end of the fort to the edge of a gravel-pit appear to be Roman in its present form, though it may represent the approach to the north-west gate modified by farm traffic. An old causeway can be traced, a little south of the modern road, from the gravel-pit as far as the railway, whence the line continues in the field (A. xix, 16, 1370) west of the embankment as a cutting leading down the steep slope to the burn by Allanton farm. This is the line of a metalled-road, and was perhaps in use until the construction of the railway, though the cutting has a rather Roman appearance.

West of Loudoun Hill cultivation appears to have destroyed all traces, but the general course of the turnpike, at least as far as Newmilns, is consistent with a Roman design. Perhaps the road leads to a port, for some intermediate station for the fleet would be very necessary on the long coast from Solway to Clyde. The river-port of Irvine, 18 miles due west of Loudoun Hill, is a likely choice,² for most of the Roman roads in south-west Scotland keep to river-valleys, and the Irvine Water, which the road certainly follows in its upper course, leads directly thither; and Irvine was the port for the sea-borne trade of Glasgow until the construction of Port Glasgow.

¹ See Macdonald, 'Roman Coins found in Scotland', *Proc. Soc. Ant. Scot.*, li (1917-18), pp 260-1

² Pococke recorded in 1760 'some works much like a Roman camp' at Irvine (*Tours in Scotland*, p. 57).

FROM CORBIEHALL (CASTLEDYKES) TO THE FORTH-CLYDE ISTHMUS

BY J. M. DAVIDSON

FROM CORBIEHALL TO COLLIELAW

(For map see Plate XXVII.)

In his examination of the Roman military ways leading from the north of England into Scotland, General Roy states¹ that from Castledykes (Corbiehall) the road, 'leaving Renstruther on the right proceeds to Cleghorn-Mill, where it has passed the river Mouss.' No descriptions of this sector exist, but it is apparent from Roy's plans² that he considered the Roman way to have left the fort of Castledykes by the west gate. Surface indications in favour of this can still be seen on a line running a few degrees north of west through the woodland strip forming the avenue connecting Corbiehall with the public highway. The road emerges from the northern margin of the trees about 500 yards west of the fort rampart, and slight traces of it can be discerned in the contour of the adjacent field. It crosses the road from Ravenstruther to Hyndford Bridge just south of its junction with the Westbank farm-road, along the southern margin of which traces of the causeway can be seen beneath the hedge and fence.

From this point its course is still fairly clear for some distance. It cuts across the corner of the Westbank farm steading and picks up the farm-road again beyond it, where its course is marked by a row of beech trees between some small-holders' cottages. The line is well marked by a dilapidated fence between two fields of the adjacent farm of Huntlybank, and again by a dry-stone dyke, which is crossed south of the farm; and it maintains the line of the farm-road, with the dyke now on its right, as far as the Ravenstruther-Lanark highway. It crosses this road on the 700 ft. contour line and maintains its direction, keeping the Silvermuir wood on its right, till a marshy hollow is reached at a well at the foot of

¹ *Milit. Ant.*, p. 104.

² *Ibid.* Pl. xxvii, cf. Pl. ix. Mr. St. Joseph informs me that the course of the road from Castledykes northwards as Roy planned it is shown in his MS. map of about 1750 (sheets 5/3, 6/3).

a steep hummock. It evades this by curving round to the left, where its course is well marked, and by an easy gradient it attains a height of about 750 feet.

Near this point, just below the crest of the ridge which has been prominently in view ever since the road left the fort at Corbiehall, is the earthwork noted by Roy as 'an old intrenchment.'¹ This is still visible within the wood, roughly parallel to the Lanark-Carstairs railway; it extends for a length of about 100 yards, having a width of 7 feet and a depth of about 3 feet (Fig. 3).



FIG 3 SECTION OF 'OLD ENTRENCHMENT' IN SILVERMUIR WOOD
25 YARDS FROM ITS WESTERN END

Immediately after passing the ridge at Silvermuir, the line is crossed by the railway, and thereafter its course is maintained for some 300 yards to the south-west corner of the Silvermuir wood. The road thus evades the peaks on either side of it on the Silvermuir ridge and also the knoll on the north side of the railway to its right. On the line across the

¹ *Milit. Ant.*, Pl. ix. Cf. Chalmers, *Caledonia*, p. 155 'On the south side of the Mouss there are the vestiges of another camp on Lanarkmuir but as there can be traced only a part of the entrenchments on one of the sides and a part of one of its ends, its original size cannot be easily ascertained.'

field between the railway and the corner of the wood, several large stones were noted to have been brought to the surface by the plough.

Up to this point there appears to be no serious doubt as to the course of the Roman road. Roy then takes it to the Mouse at Cleghorn Mill, and Mr. O. G. S. Crawford from surface indications gives his weighty support to this view. Here a suitable approach to the edge of the stream, whether for a crossing by ford or by low-level bridge, is given by a strip of gently sloping ground which intervenes between a narrow, rock-banked, bottle-necked gorge, within which the Mouse is constricted immediately below the Mill, and a broad alluvial area, giving ample evidence of flooding, which extends upstream to Hagholm ford. But if the road crossed the stream at the Mill and not, as has been suggested, at Hagholm ford,¹ it cannot have run, as Roy supposed, through the low-lying 'inclosures of Cleghorn', but must have turned at once upstream to ascend by an easy gradient to the high ground north of Hagholm ford, now occupied by Cleghorn Station, railway embankments, and a massive stone viaduct. As viewed from Corbiehall, the hill at Silvermuir, at the point noted above, was undoubtedly the Roman objective, the road hardly deviating from that line. From this eminence the next prominent objective would be the hill of Kilcadzow (1040 feet). The Roman feature of alinement by prominent landmarks needs no emphasis, and, in fact, at more than one point north of the Mouse traces of the road are to be found between these summits. The traces, as we shall see, point back to the high ground overlooking Hagholm ford, where indeed a short length of the road appears to be clearly recognizable in the form of a well marked terrace, about 18 feet wide (Fig. 4), in a skirting of trees leading to the ruins of Old Windsor, on the north side of the Cleghorn-Wilsons town highway. At intervals throughout this length a certain amount of stonework is visible, and a systematic piercing with a steel probe gave indications of a hard core a few inches below the surface.

¹ A. MacCallum Scott, *Clydesdale* (1924), pp. 116 f. The reasons there given for this view cannot all be accepted as valid, and while it is true that the line of the road north of the Mouse, as explained in the text, points to the high ground overlooking Hagholm ford, the descent from there to the ford is rather steep, and an oblique approach to the stream at the Mill seems more probable

This formation is shown by Roy¹ as the western side of the large marching-camp at Cleghorn. The intervening 170-80 years have treated the surface indications kindly, the ground, being woodland, having apparently not since been under cultivation. From this surface-evidence several reasons can be adduced against Roy's view.

Some thirty yards to the east the ground falls away, and a rampart on Roy's line would be on a descending slope. As a matter of fact, the formation within the strip of woodland bears no resemblance to the remains of a rampart and ditch. At the north end, moreover, these remains end abruptly at the boundary-wall running west from the Cleghorn-Kilcadzow road, there being no indication of either rampart or ditch in the field between that point and Old Windsor.² Nor is there any

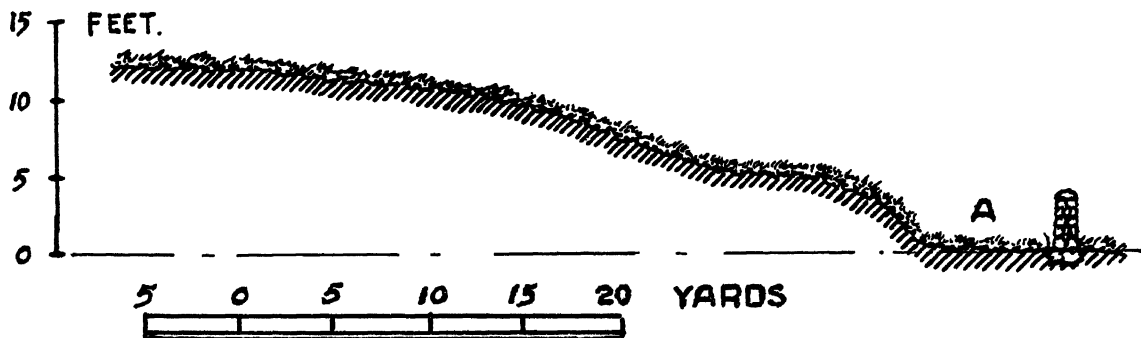


FIG 4 PROFILE OF GROUND SOUTH OF OLD WINDSOR, SHOWING TERRACE (A) IN SKIRTING OF TREES, WITH BOUNDARY-WALL AT ITS WESTERN EDGE

trace at Old Windsor of Roy's corner, the formation visible in the skirting of woodland continuing northwards past this point. A prolongation northwards of the course of this formation alines with a point in Collielaw

¹ *Mssht Ant*, Pl ix (dated Sept 7th, 1764)

² The owner of the ground, Mr Craig of Stobilee Farm, has never observed in the driest summer any differentiation of colour or growth such as would indicate the presence of a ditch. With his ready permission a trench was cut across the line of the north defence of the camp. No ditch was encountered.

Wood, where, as we shall see, an undoubted length of the Roman road has recently been exposed. Southward the line, as has been said, points to the high ground overlooking Hagholm Ford.

From Old Windsor the causeway crosses a field to the north, leaving a wall on its right, and enters Highgate Wood less than 50 yards from the public road; here its stony surface can be seen below the branches of fallen trees. About 150 yards further on, in the same line, in a tangle of scrub, roots, and young trees, some 30 yards west of the highway, a large kerbstone, about two feet square, protrudes.

About 250 yards onward the road emerges from the wood and cuts across the north-east corner of a large field before crossing a pathway in a fine avenue of trees about 100 yards west of the highway. In the adjacent field to the north the contour of the causeway cannot be discerned, but, in the hollows marking each rig cutting through it, stones can be seen on the line, while the bank adjoining the woodland is lined with large flat stones removed when they were uprooted by the plough. The line of the road is clearly marked here by a clearing in the Collielaw wood, and as it leaves the field to enter the wood, a bank forming the boundary has been cut away and large flagstones have been thrown to the sides.

The pathway in the clearing is on the Roman line, and about 100 yards beyond the clearing in a wooded area, a well-dressed, flat, sandstone kerbing, 20 inches by 18 inches by 5 inches thick, is exposed at the east side of the causeway where it has been intersected by a small ditch. The roadway is here about 18 feet wide. Other kerbstones are exposed, displaced by the cutting of the ditch.

After another 150 yards of cleared ground, which has reverted to moorland, the road re-enters woodland, at the western edge of which, at a field-corner some 250 yards south of the farm steading, Mr. Cooper, the farmer, gave permission to make a trial cut. The apparent line of the roadway proved to be superficially misleading, but, immediately adjoining this to the east, another trench was cut and a fine stretch of roadway was exposed, only six inches below the heather (Plate XXVI). The road was 19 feet wide and was lined with heavy kerbstones on either side (Fig. 5). The foundation was carefully laid with a sound bottoming of stones, and the surface was well cambered with a surface spread of light gravel, evidently brought from some distance, as it consisted of water-worn pebbles inter-



ROMAN ROAD SOUTH OF COLLIELAW FARM-STEADING

mingled with flints not found in the immediate neighbourhood. On either side of the roadway, bordered by the kerbstones, was a ditch or drainage-channel, about 3 feet wide, partly covered by the foundation of the road, though this might be accounted for by slip. The ditches were rendered watertight by a blue-clay lining.

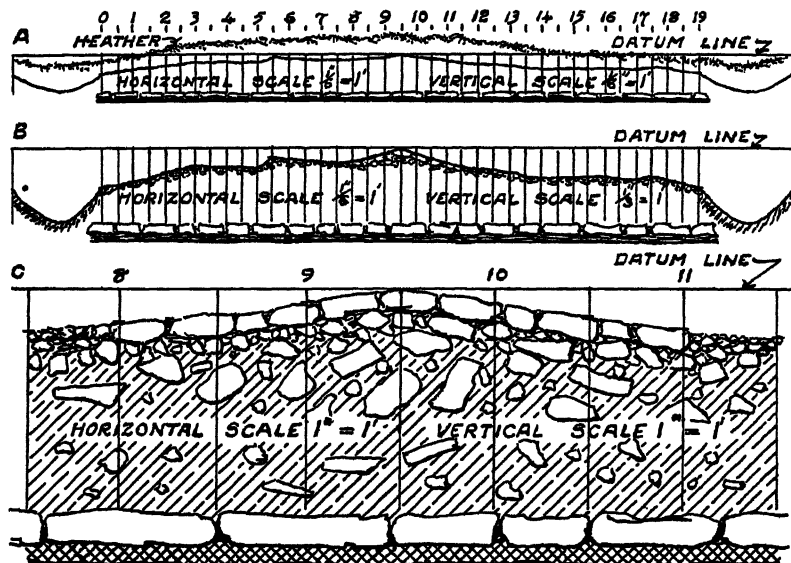


FIG 5 CROSS-SECTIONS OF ROMAN ROAD SOUTH OF COLLIELAW FARM-STEADING

From Corbiehall the route, as here marked out, would run in two straight sectors, connected by a short deviation at the crossing of the Mouse designed to gain the high ground on the north bank of the stream.

FROM COLLIELAW TO BELSTANE

(For maps see Plates XXVII, 2, and XXIX, 3-4.)

The farm-house of Collielaw is built over the causeway, and a line of the kerbstones can be seen projecting about 3 feet from below the west

wall of the stackyard, on the north side of the branch road leading to the farm. On the ascending slope of the field in which the stackyard is placed, just a trace of the contour of the roadway can be discerned, and at Collielaw Cottage, on the 900 ft. contour line, it merges with the modern highway. A continuation of this line for a further 300 yards carries it down to the Back Burn. Here some of the stones of the causeway can be seen on the east side of the road.

At Hole the barn is built on top of the Roman road, which crosses the Kilncadzow-Edinburgh thoroughfare about 80 yards east of its junction with the Cleghorn road. It then bends round and takes a course to the north-west, ascending the Hill of Kilncadzow by an easy gradient. The course of the road is well marked in this first field north of the highway as far as a stone dyke, and in the adjacent field, east of the farm, traces can be seen alongside of and parallel to the dyke which forms its northern boundary. The line runs through the garden and house of Hill of Kilncadzow to emerge on the farm-road west of the steading. Its direction at this point is almost due west. In the field immediately west of the farm-road, it keeps the dyke on its right, but in the adjacent field to the west it is found on the north side of the dyke, along which it runs practically on the 1000 ft. contour line.

The route along the high ground (Plate XXVIII, A) is impressive by the view which it commands, no fewer than 16 Scottish counties being visible and 100 mountain peaks to a range of over 50 miles. On the windswept heights the road is, in many places, on the native rock, but the Rev. Dr. Scott of Carluke described¹ how 'in some places, especially at Kilncadzow, it is still so visible that the manner of its formation can be easily ascertained. The Romans appear to have placed broad stones in the bottom of the road where the ground was soft and broke others very small, with which they covered the surface.'

The course over Kilncadzow Law is to the north-west. After passing the summit, some 60 yards below it, the road is well marked as it descends gently, leaving a quarry on the south and crossing a trackway leading to Kilncadzow village. Thereafter a long straight stretch, well set-out along a boundary dyke, carries it over the high ground to emerge through a gateway on to an old quarry at an open space on the Kilncadzow-

¹ *Stat. Account*, p. 136, Carluke Parish (1793).

Coldstream highway, with which the road merges in its descent to Callagreen. The dyke on the west side of the road here is piled with flat stones ploughed up from the causeway, over part of which the wall has been built.

On the opposite side of the highway at the point where the Callagreen Quarry road joins it, at the corner of the adjacent field, the foundation of the causeway can be seen in a bank extending below the road-dyke as far as the corner where the highway takes a bend to the north-west.

Short of Mid-Coldstream, on the north side of the road, the causeway can be seen in a bank behind a dyke. It passes in front of the cottage there and through the farm steading to emerge again on a straight length of the modern highway which crosses the Coldstream Burn. At Coldstream a copper coin of Commodus is said to have been found about 1834.¹

The road is quite straight as far as Croftfoot, where the modern roadway takes a slight bend a few degrees to the north-west. The Roman road, however, maintains its course, and, cutting off the angle of a field enclosed by dry-stone dykes, which is utilised as a dump for motor vehicles, it enters a field to the east of Over Quarter Farm, where, for 250 yards, the line is visible, marked by a low spreading mound. Mr. Moffat, the farmer, informs me that in ploughing this field he has repeatedly come across the track of the causeway, which is always particularly well defined when the field has been under the plough, because of its stony surface.

After crossing the end of the farm-road to the east of the steading, the line is lost for a hundred yards, but the causeway is again well defined for 50 yards in a bank surmounted by a hedge and by a line of fir trees to the north-east of the school playground at Yieldshields.

Over Yieldshields Burn the road found an easy crossing, and on the west side of the stream traces can be picked up on the left of the highway in the skirting of Scots fir trees adjoining it, and the line of the modern road is maintained as far as the Moss-side Burn. This is crossed to the south of the present road-bridge, where the Roman line is well marked within the Hillhead Wood bearing south round the hillock cut through by the modern road, which it rejoins some 100 yards further west.²

¹ Rankin, *Notices Historical, Statistical and Biographical relating to the Parish of Carluke, from 1288 till 1874* (1874), p. 14.

² 'A horse-shoe described as "Roman" is said to have been found deep in the soil on the lands of Hillhead near the Roman way' (*ibid* p. 15).

At Dyke the causeway can be seen, on the left of the road, east of the cottage there. It is again visible north-west of the cottage, where an old cart-road runs side by side with it. In extending the kitchen garden, in what was waste ground, many stones were recently thrown out from the foundation of the road. For some 200 yards the part described by Stuart¹ is still plainly to be seen in the rough ground between the hedge and the roadway, its course being marked by a line of stumps of willow trees. Many of the kerbstones and foundation stones of the causeway can still be discerned, the width at that point being apparently about 12 feet.

Short of the Belstane Burn, however, the roadway is again lost sight of, having been totally removed by some surface quarrying operations. At Belstane Farm a slight fragment of the causeway remains at the south-east corner of the cross-roads there. A silver medal of the Empress Faustina is said to have been found at Belstane.²

The approach to Belstane is thus well marked, but no sign of any branch-road junction was observed here, though this has been thought probable by Sibbald, Gordon and others.

BELSTANE TO BOTHWELLHAUGH

(For maps see Plates XXIX, 4-6, and XXX, 7-8.)

In the field north of Belstane farmhouse little trace can be seen, but on the western boundary-fence stones from the foundation which have been dislodged in ploughing are piled alongside. From the high ground here, which is just above the 700 ft. contour, the next objective of the Roman engineers appears to have been the knoll on which Gillhead farm is situated, close by Law Junction Station.

From the summit at Belstane the road descends to Garrion Burn, and in the well-cultivated fields adjacent thereto no sign of its line is now visible. It appears to have crossed the Castlehill-Hyndshaw highway about 150 yards south of Castlehill Farm, from which point its line is completely buried under the railway sidings, bings and debris of the Castlehill Colliery, to emerge at a crossing of the Garrion Burn north of the Carluke-Airdrie road, where signs are visible.

¹ *Caled. Rom.*, p. 259: 'At Dyke it is very perfect, having on one side some appearance of an *agger* or wall'

² Rankin, *Notices relating to Carluke*, p. 14.



A COURSE OF ROMAN ROAD OVER KILNCADZOW LAW



B COURSE OF ROMAN ROAD WITHIN GROUNDS OF WISHAW HOUSE

At Castlehill a gold coin of Nero was found in 1784.¹ This seemed a likely site for an intermediate station between Castledykes and Bothwellhaugh. Adjacent to the old Toll House there is a large flat area of high ground skirted on its south-eastern side by the Garrion Burn. From the vantage point of a nearby colliery refuse-heap the outline of a square enclosure appeared to be visible. Superficial examination of the site tended to confirm this, together with the coincidence of those geographical features commonly associated with Roman sites, e.g. outlook, command of the adjacent ground, tactical strength, proximity to water, control of the crossing of a fairly considerable stream, etc. Even the gateways seemed apparent from the bird's-eye view. A trial cut across the supposed southern rampart, however, failed to confirm the existence of a Roman entrenchment.

The roadway, nevertheless, is close at hand. 'In draining the large field west of the toll-bar spoken of, the drains crossed the old Roman road every fifteen feet; and so far as the draining extended, the line and structure of the ancient way was positively determined. It was found that the survey plans indicated the road too much to the south, at the widest deviation by about 300 ft.'²

It would appear, though no traces are now visible, that it crossed the Garrion Burn about the position of the present Wildman Bridge, and, keeping the knoll at Gillhead Farm to the south, made a second crossing of the Garrion south of and adjacent to the present road-bridge on the Gillhead-Waterloo farm-road. The approach to the stream is well marked, and in view of the steep banks on either hand, this seems to be the only possible crossing.

In the fields to the south of the Gillhead road traces of the line can be seen, and the causeway merges at Gillhead in the Bogside-Wishaw trunk road, its course being maintained through Waterloo and along Wishaw Main Street. At the north-west end of this street the main road turns sharply to the south-west en route to Motherwell, but 'Watling Street'³ maintains its straight course and enters the grounds of Wishaw House at the lodge gate in Cleland Road.

¹ *Proc. Soc. Ant. Scot.*, lii (1918), pp. 243-4.

² Rankin, *Notices relating to Carluke*, p. 21.

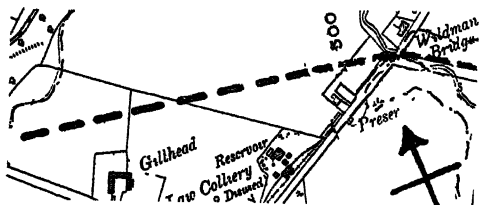
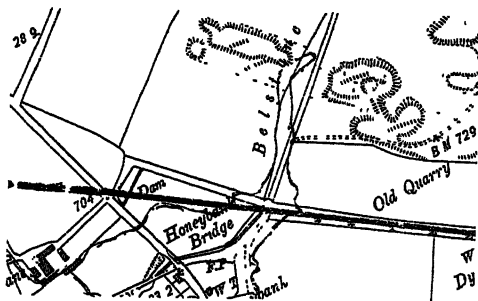
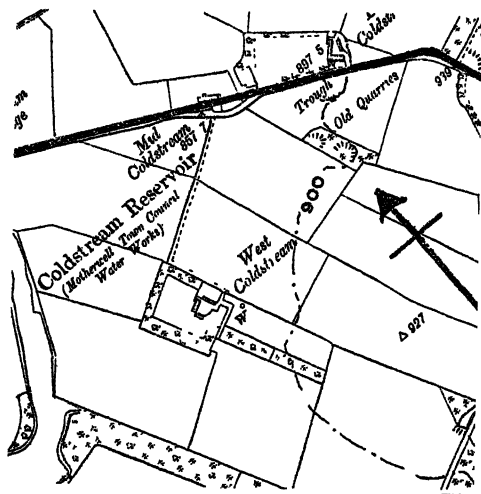
³ According to Chalmers, *Caledonia*, p. 135, the Roman road was 'known throughout Clydesdale' by that name.

Mr. Alexander Blair, factor to the Wishaw Estate, kindly gave permission to examine the road within the grounds, where its course is well marked by an avenue of young trees (Plate XXVIII, B). A cut across the trackway was undertaken at a point about 120 yards south of the Mortimer Road entrance.

The surface had a cinder covering and a metalling of modern road material 9 feet wide. Beneath this, however, was found a heavy bottoming of large cobbles 13 ft. wide, extending beyond the trackway two feet on either side below the grass verges. On the south edge was also found a ditch cut in the clay, while on the north another ditch, into which metalling had spilled, was not so marked. The kerbstones on this side were particularly heavy. The roadway had none of the careless and casual character typical of the ordinary colliery haulage road.

The route continues its course direct from Meadowhead, where kennels are now situated. All traces are, however, now obliterated owing to the construction of the Wishaw-Carfin branch of the L.M.S. Railway. On the other side of the embankment, beyond some large refuse-bings, the track is, however, again picked up in an arable field at Craigneuk. From a point at the junction of the Carfin and Overjohnstone roads, looking east over a field, one can clearly discern the line of the roadway, and in the centre of the field an angular deviation of the route can be seen. The traces of a pipe-line having recently been cut across this suggested that the contractor might provide simple and inexpensive proof of the existence of a roadway below the surface. This enquiry, however, proved negative, no road having been cut through in the construction of the pipe-line. A further cut was therefore undertaken about 60 feet west of the deviation referred to, and not until 2 feet 3 inches below the surface was the rough uneven foundation of an 11-foot-wide roadway encountered. The bottoming was rougher and more nondescript than anything hitherto uncovered, but the absence of any stones in the material removed and the manifestly artificial setting of heavy stones seemed to place the question of their origin beyond doubt.

From this point no further trace of the road could be detected, the line being entirely lost among colliery and steelworks refuse-heaps. A continuation of the line appeared to take it through the works of the Lanarkshire Steel Company.



Numerous writers¹ have testified to the existence of a 'Roman camp' in the centre of the parish of Dalziel, in the ditches of which were found 'cinders of the Roman forges', but which was said to have long since disappeared. This site at Carshogle was identified, and it afforded some pretext for the Roman origin attributed to it, but it is situated a mile south of the Roman road. It lies on the top of a precipitous rocky bank overlooking the Clyde to the south-east side of the viaduct of the L.M.S. Railway, Lesmahagow Branch, and within the policies of Dalzell House. The greater part of the area has been feued to Mr. McKenzie, whose house is the 'Summer House' built in the centre of the 'camp' which is referred to in some accounts of the site.

In the absence of Lord Hamilton of Dalzell, his factor, the late Mr. James Wilkinson, was not aware of any records in Dalzell House of relics or information derived from a previous exploration of some 100 years ago.

The plateau is sufficient to accommodate a small fort, its outlook over Clydeside and the simplicity of its defence might have suggested the choice of such a position. What remains of the work is impressive, if somewhat scanty. On the east is a 50-feet stretch of a substantial mound, 30 feet wide and about 6 feet high. The corner joining this to the south mound is gone, partly owing to terraced formations, and partly to slip down the precipitous slope into the river below. About 30 yards along the south side there are slight indications of the swell of a mound, but the ground is within Mr. McKenzie's garden and is covered with fruit trees, and it would be difficult to substantiate this. The railway referred to cuts across the west corner, and as the north side is greatly disturbed by the dumping of colliery refuse, the only possibility of testing the nature of the site was to dig the eastern mound.²

This has been protected by an enveloping ring of beautiful beech trees, well grown and finely preserved, within the Dalzell grounds. On the mound itself others had been planted, but these had been cut down during the war of 1914-1918. These great trees, with their wide-spreading roots,

¹ e.g. *The Stat. Account*, vol. iii, Dalziel Parish.

² To Mr. McKenzie and to the late Mr. James Wilkinson thanks are due for granting permission to explore the nature of the earthwork.

have afforded, and continue to afford, the most ample protection, as the roots resisted attempts to excavate and made the task one of great difficulty.

In fact the rampart hardly required such solicitous shelter. Some half a dozen trial-trenches were dug where roots afforded access, but the material was so resistant as to make excavation by ordinary methods almost impossible. The clay was baked so hard and dry that it had assumed a concrete-like consistency and practically defied penetration. On cutting in from the east a distance of 10 feet, a depth of 6 feet from the top of the mound was reached. From the south about 3 feet 6 inches and at the north about 4 feet in depth were taken out, but no relics of any description came to light. A few pebbles among the compact mass of clay gave no indication of period or date, and no trace of foundation work or stratification of the material was evident. In a hollow to the east of the mound a trench encountered no trace of artificially constructed ditches. The evidence of this excavation was, therefore, purely negative, as one would expect from the distance of the site from the Roman road.

From the Lanarkshire Steel Works the road passes into and through the grounds of Dalzell Steel Works, from which it emerges from below a mountain of slag and debris. It can be seen for a few yards at a higher elevation than, and to the south of, a short roadway connecting Albert Street, Motherwell, with some filter-beds, these latter being situated between a works railroad and some large stables. It crosses Coursington Street, and the Bakery Department of the Dalziel Co-operative Society lies athwart it as it merges into Dalziel Street, along which it proceeds as far as Merry Street. After crossing this main thoroughfare it enters by a narrow bottle-neck, divided by a low brick wall, a street named 'Roman Road', along which its course runs straight to Parkneuk School, the playground of which it traverses on its south side. Beyond this point it is lost below the high embankment and bridge carrying the main road from Motherwell to Bellshill, and for a further 400 yards within Motherwell Bridge Works no trace is to be seen till it re-appears at a level crossing beside North Motherwell Farm.

From this point to the fort of Bothwellhaugh the course is somewhat uncertain. The 6-inch Ordnance Survey Map shows 'Watling Street' running north-west, this course now coinciding with a new modern road

built to serve a housing scheme. At an electric sub-station it turns almost due west for about 600 yards, when its course deviates south-west for about $\frac{1}{4}$ mile, keeping all the way on fairly level ground. It is then shown to turn through a right angle and, inclining to the north-west, to impinge upon the fort on its way to the crossing of the South Calder Water.

The O.S. course of 'Watling Street' is thus seen to be circuitous to a degree that the lay-out of the ground would hardly appear to warrant. From the east the approach to Bothwellhaugh is broken by small gullies, one of which runs almost parallel to the south-east rampart. The route indicated avoids this gully by skirting its northern end, and by turning south-west in its approach towards the river it avoids its steep slopes and maintains a uniformly level course. If, at the point where 'Watling Street' turns north-west to proceed through the fort, its course were continued straight on for about 100 yards, there is a good approach to the south-east gateway.

An alternative route from North Motherwell Farm might have been by 'Logan's Road', which proceeds south-west as far as North Motherwell Colliery. By keeping to the north side of a gully it might have crossed the one referred to above and by a gentle ascent of the slope of the latter it had a good approach to the south-east gate. This route has the advantage that it keeps the fort within sight practically throughout its entire length.

The ground between these two lines is now taken up by an immense colliery refuse-bing occupying a wide area of ground, but a middle route may not have been impossible. The surface of the ground is so much broken up now that it is not possible to trace any route, though a direct line from North Motherwell Farm to enter the fort by the south-east gate is by no means impracticable.

The approach to the fort from the east must therefore be regarded as uncertain and other considerations emphasize this. The field adjacent to the north-east rampart of the fort and separating that from the river is known locally as 'Roman Camp' (p. 186). On the brink of the high ground overlooking the stream are to be seen signs of old roads. The 'Roman Camp' tradition suggests the presence of an encampment on this site, which, from the fact of an established fort on the adjacent ground, might be presumed to be an annexe thereof, or (and) perhaps the site of an

earlier fort. West of this area can be seen a well-defined roadway connecting the old river-side roads with the north gateway of the fort and probably forming a loop round the south-west side to link up with the supposed south-west roadway from North Motherwell Farm.

The modern crossing of the South Calder Water is by a high-arched, stone bridge, known in the district as the 'Roman Bridge', though it is obviously of mediaeval or later origin. Some attention was devoted to this to ascertain whether there were incorporated in its structure any stones bearing marks of Roman working which might have come from a former bridge or ford, but no evidence was found of such.

BOTHWELLHAUGH TO GLASGOW

(For map see Plate XXX, 8-10)

From the crossing of the South Calder Water the course of the road can be discerned in the woodland strip west of the Bellshill-Bothwellhaugh main thoroughfare in the ascent to the highway level. Its course to the north-west is uncertain: on the west side of the modern road are the remains of the Bothwellhaugh Plantation, now consisting only of tree stumps and a tangle of bramble and briar bushes, and the land is so rough and broken that no traces of the military way can be seen. For the next mile also no vestige is to be looked for, as industrialism at its worst has left unsightly coal refuse-bings, derelict colliery-sidings and all the debris associated with mineral workings spread over the countryside.

At Bothwell Cemetery, however, west of Bellshill, traces are again picked up, the lodge-keeper at the west lodge vouching for the existence of a roadway about 12 inches below the surface of his garden to the west of his house. At Fallside the line of the road is marked by a row of tall beech trees, and a ragged hawthorn hedge running parallel to it in a paddock to the north of Fallside House is on the edge of the Roman road. This appeared to be visible on the surface, not so much from contour indications as from the band of colouring of the grass covering it.

A section was cut about 50 yards west of the adjoining Manse garden boundary-wall, and 15 inches below the surface a rough cobbled road was encountered about 14 ft. wide. The surface was very uneven and no large kerbstones or paving slabs were disclosed. The ground covering

the roadway was very hard and it was evident that it had not been disturbed for a very long period.

The line is again visible on the west side of Spindlehowe Road about 100 yards south of the old Edinburgh road corner, into which road it practically merges about 200 yards east of Birkenshaw Farm. It can be seen intermittently on the south side of the road as far as the corner at Calderbraes.

From the golf club house there the track can be seen along the slope below a skirting of trees swinging round to the south just short of the golf green at the side of the main road, which it crosses diagonally, swinging down to a favourable crossing of the North Calder Water at the east pier of the railway viaduct and crossing the stream obliquely to the east of it.

Thence the road leads direct to Tollcross, Roy recording that 'traces of it were lately to be seen particularly a little to the eastward of Tollcross.'¹

Glasgow would probably be entered by way of what is now Great Eastern Road, and the route would appear to have been by the Drygate and Dobbie's Loan, Port Dundas, Possilpark and Lambhill to the fort of Balmuirdy on the Antonine Wall. This fort and Castlecary, it has been suggested,² were probably the twin terminals on the Antonine Wall of the road from Castledykes, Balmuirdy being the point by which communications was maintained from the south with the western end of the Limes. Nothing in this Clydesdale route, as now ascertained, has required this suggestion to be amended and a good deal has served to confirm it as a reasonable hypothesis, though in view of city and industrial development it is unlikely that conclusive proof will ever be forthcoming.

IRVINE AND THE FORTH-CLYDE LIMES

If there was a Roman fort at Yorkhill,³ it would not guard a crossing of the Kelvin by a road running west but a crossing of the Clyde by a road from the south bank of the river. Now that it has been proved that there was a Roman fort at Loudoun Hill, which in turn seems to imply that the Avondale road ran to a harbour at the mouth of the Irvine Water, the

¹ Roy, *Milit. Ant.*, p. 105.

² Miller, *The Roman Fort at Balmuirdy*, p. 3.

³ See J. Buchanan, *Proc. Soc. Ant. Scot.*, xii (1876-8), pp. 256-7.

case for direct communication between that region and the Limes has been greatly strengthened.

THE SUPPOSED ROAD FROM CLYDESDALE TO CASTLECARY

(For map of area see Plate XXXI.)

The existence of a branch road linking the Clydesdale route from a point near Carluke with the isthmus fort of Castlecary has frequently been suggested. Roy is very guarded in his reference to this supposed link and merely suggests the most probable route it would be likely to follow.

Various writers¹ have considered that the Roman road branched at Belstane, and in an old edition of the 6-inch Ordnance Survey Map² this is plotted from Belstane curving round in an almost semi-circular course past Hyndshaw Farm and then turning north through a right angle to the Old Wishaw-Edinburgh road at a point about half-a-mile east of North Hyndshaw. This line measures just short of 2 miles compared with a distance between the two points of $1\frac{1}{2}$ miles as the crow flies. The route indicated, however, has been omitted from later editions of the O.S. Maps.

A careful search³ along the whole of the supposed route in 1939 furnished little, if any, confirmatory evidence of its existence. Certainly, from about 300 yards north of the Belstane Farm road junction, where the modern highway takes a slight bend, the following 600 yards is a fine straight stretch of roadway as far as Belstane Place, with a trackway about 10 to 12 feet wide on its eastern side, which shows some signs of sound bottoming. This, however, may be related to some old ironstone mines adjacent thereto. From Belstane Place the line might have crossed the Bowbridge Burn some 100 yards west of the farmhouse of that name, and in the field to the north of the farm-road the suggestion of a track can be discerned before it is completely lost sight of in the cultivated fields. The same line can be picked up again on the rising ground beyond the overflow burn from the Wishaw Waterworks Reservoir, where at an

¹ e.g. Stuart, *Caled Rom.*, p. 259.

² Lanarkshire, sheet xix

³ Thanks are due to Mr. John Grossart, Salsburg, Mr. Alexander Chalmers, Duntillan, Mr. James Allan, Castlecary Castle, Mr. Charles Taylor, Castlecary, and the factor of the Earl of Zetland Estates for permission to examine various sites and for assistance received.

obtuse angle of a field it continues along the hedgerow to the crest of the hill on the 900-foot contour, along which the old and now disused Edinburgh road runs. On the northern descent no sign appears except that in a break in a hedgerow a large, oblong, pointed sandstone-block appears, suggesting that a boundary stone has been overturned from its position.

At Watsonhead the line of the modern road might again have been regained and a course maintained east of Watsonmids and through Watsonfoot. The only point at which substantial confirmation of such a line could be adduced is a short stretch north of the Rumbling Sikes burn, where, on the north side of the Dura road, about 50 yards east of its junction with the main highway from Watsonfoot to Allanbank, traces of an ancient roadway can be seen. This rejoins the line of the modern road 400 yards to the north.

A Roman road on the supposed course would presumably proceed through Allanton and Penty, but no trace has been discerned between these points nor over the moorland area west of Shotts Kirk. North of Salsburgh it is said to have passed through a meadow 'where, during agricultural operations, a road was discovered and the stones taken out. Heaps of these stones are still to be seen in the neighbourhood.'¹

Many of these heaps of stones are still visible, but their scattered situation does not indicate that they were derived from a single line of roadway.

Dr. Grossart draws attention also to a road at the north base of Duntillan Hill which emerges in a strip of marshy ground. This roadway is, in fact, still quite clear and measures about 12 ft. wide. It is raised about a foot above the surrounding swampy ground, but its direction from the south does not suggest a relation to a Roman route since its course emanates from the central point of the formidable sides of Duntillan instead of skirting its base as would be likely if it followed a Roman line. Rather, this road appears to be connected with some pits in its line to the north, from which stones have been quarried, probably for metalling the adjacent highway.

From Mountcow farm the route was thought to have traversed the moors around Braco, where the existence of a camp on Alice Hill has not

¹ Grossart, *History of the Parish of Shotts* (1880), p. 104.

been confirmed despite a careful search carried out at different seasons of the year. The site on Alice Hill appears a likely one, but it cannot be stressed as more than that. It was immediately to the north, at the side of the roadway at the foot of Drumfin and beside the Ordnance Survey bench-mark at the 732-feet level, that an important hoard of Roman silver coins was found in 1842.¹

It is recorded that in repairing the sluices of the reservoir at Lilly Loch the remains of an ancient causeway were found.² The Roman route is then thought to have skirted the west end of Hillend Loch, and thence to have passed over the moorland wastes about Longriggend and across the desolate wind-swept Fannyside Muir, but no actual trace of it has ever been recorded hereabout.

Quite suddenly, it emerges at Crowbank Farm, about two miles south of Castlecary. From the courtyard at the north side of the house it proceeds NNW., and some 50 yards along it skirts the east side of a little horse-pond, which may have been a roadside pit for road-metal. Skirting the adjoining field the road is well defined as it follows the eastern boundary of the next, the metalling and the ditches on either side being very pronounced. At the north-east corner of this latter field is a fine well of spring water on the very margin of the road. Continuing the same line the road enters the field adjoining the Walton Burn, where, however, owing to cultivation, a careful survey could detect no trace of it, though it was noted that the only three boulders brought to the surface by recent ploughing all lay on the exact line of the road.

The descent to the Walton Burn is steep, but the crossing is well marked, the line of the road taking the form of a Z bend, first to the west, sloping gently down to the edge of the burn, then turning acutely to the north-east, a shelf on either side of the stream affording a simple and easy crossing. Another bend to the north-west took it up the slope again by an easy gradient to a level approximately the same as on the south side of the stream.

Faint traces of the road could be seen as stony patches in the field between the Walton Burn and Bandominie South Wood, which it entered

¹ See Macdonald, *Proc. Soc. Ant. Scot.*, li (1918), pp. 261-2, and Iviii (1924), p. 239. Sir George Macdonald's list includes six coins now in the possession of Mr. David Thomson, Glencoe, Cleland, which appear to have formed part of the hoard.

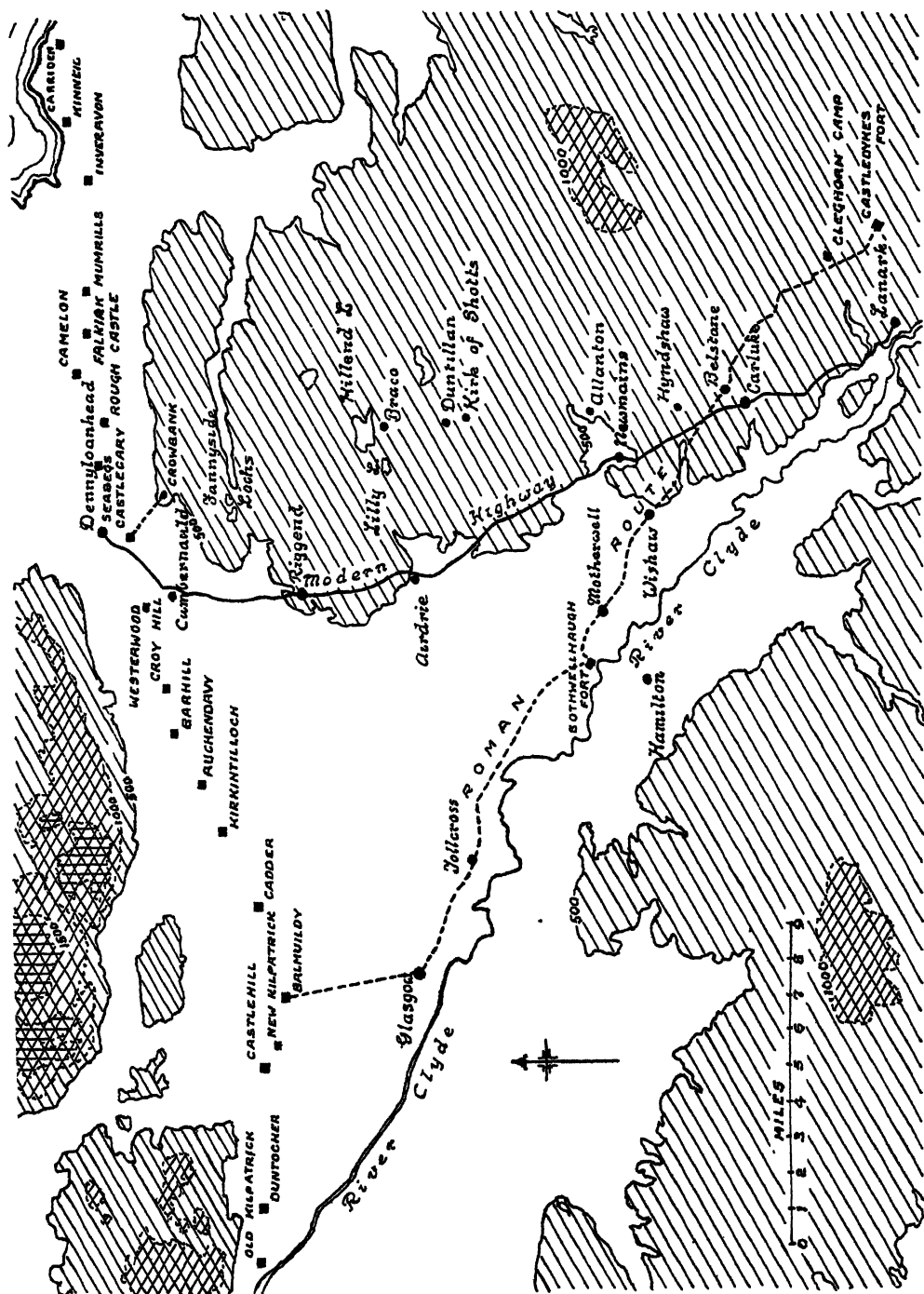
² Stuart, *Caled. Rom.*, p. 260, note.

Glenhead. Crowbank is on the 500-foot contour line and this roadway is almost 100 feet lower in elevation. The field, therefore, has a fine sunny exposure to the south, and, with excellent drainage, it has in consequence been well cultivated. It is noteworthy that the Roman road from Castlecary does not appear to have continued south of Crowbank, not a trace, being visible in this field of line or contour or stonework or colouring of crops to give the slightest indication of its continuance. South of the cross-roadway the Fannyside Muir begins and no trackway or path of any kind is known to have crossed the vast expanse of moor, bog and swamp between Crowbank and the Fannyside Lochs.

Possibly, too great stress has been laid on 'the remains of the ancient causeway . . which were accidentally laid open by some workmen employed in repairing the sluices of a small compensating reservoir called the Lilly Loch': a discovery considered by Stuart to be somewhat interesting as showing the course of the Via to have led by Braco—a circumstance till then uncertain.¹ The sluices referred to are cut through the base slopes of Drumfin, a large basaltic mass, around the foot of which it would not have been necessary under any circumstances to have constructed a causeway. Stepping-stones exist at the present day across the escape from the sluices, as also across several marshy gullies in the neighbourhood. An embankment with its concrete sluices at the Lilly Loch now lies on the pathway connecting the Caldercruix main road with the roadway on the south side of Drumfin, and before embankment and sluices were constructed the crossing of the gully leading from the Lilly Loch must have been difficult in most seasons of the year. A more elaborate and serviceable form of crossing than the simple stepping-stones roadway could therefore naturally be looked for, and it might well be that a rough causeway across the channel eroded by the overflow of the loch was constructed and subsequently laid bare, particularly as this causeway was found during a repair of the sluices and not at the original building of them.

The finding of Roman coins on the opposite side of Drumfin, some 400 yards distant, probably tended further to emphasise the importance of the discovery of the 'ancient causeway', and the presence of a Granary Hill not far distant may have lent still more colour to the legend.

¹ *Caled. Rom.*, p. 260.



FROM CASTLEDYKES TO THE FORTH-CLYDE ISTHMUS

On the whole it must be regarded as doubtful if a road from Belstane to Castlecary on Roy's line ever existed. An alternative line, however, might be suggested (Plate XXXI). North of Belstane (Carluke) Roy's line would cross a wide tract of desolate moorland where a road would be wholly out of touch with the isthmus system until it looked down upon it from Crowbank. If, on the other hand, the road from Castledykes, where it begins, about Carluke, to descend towards the fort near Bothwellhaugh and the plain of the lower Clyde, threw off a branch which continued along the edge of the high ground that flanks the plain, turning with it, as it recedes eastwards, as far as Crowbank, Castledykes would be connected with Castlecary by a line which, while almost as direct as Roy's, would overlook the whole valley of the lower Clyde and along which a signalling system could readily be organized linking Castledykes with the isthmus forts from Castlecary westwards.¹ For a road on such a line there is at present no positive evidence, any more than there is for a road on Roy's conjectured line, but it would be the more suitable as a link between the Limes and the supporting fort at Castledykes.

Castlecary is cut off from a view southward by ground which rises some 300 feet to the crest of the ridge at Crowbank, which commands an extensive view of the country to the south. The level crest of the ridge, about an acre in extent, would allow room for a small post of the Milton type with its defences, and it may be worth noting that outside the garden wall of the farmhouse, on the east side, there is a short length of stone kerbing reminiscent of Roman work and suggesting a spread of stones such as underlay the rampart at Milton and extended over much of the interior. With the milliary fort of Castlecary only two miles away, however, it seems more probable that, if there was a small work on Crowbank, it would take the form of a signalling-station. The site, which is within view of the fort, is admirably adapted for look-out purposes.

¹ The course suggested would run (roughly) along the 500-ft. contour line, and between Carluke and Riggend, whereabouts it would swing eastwards to Crowbank, it would approximate in a general way to the corresponding part of the modern highroad from Lanark to Stirling (Plate XXXI).

II

THE BRIDGE OVER THE KELVIN AT SUMMERSTON

By J. M. DAVIDSON

In 1941 the deepening of the river Kelvin at Summerston by the Department of Agriculture for Scotland brought up a considerable number of sandstone blocks and some fragments of timber close to the line of the Roman Wall, immediately to the north of the fort of Balmuldy.¹

Most of the stones are roughly square and of large size : 21-24 in. by 14 in. may be taken as representative dimensions. A number of them show characteristic Roman tooling, examples occurring of the common diamond-shape, double herring-bone, and fern-leaf patterns. Many of them have dovetailed recesses cut in them for clamping them together (Plate XXXII), similar to those found in the foundation-blocks of the north gate of the adjoining fort.² A careful scrutiny of these recesses failed to disclose any signs of ferruginous staining such as would show that they had held iron clamps, but the corners of some appeared to give indication of concrete adhesions.

The stones had been laid on their natural bed with one or more recesses cut horizontally, in the usual way, on the upper face, but in one or two examples one or more recesses had been cut also on the opposite face. Since stones would not be clamped on their lower as well as their upper face, this seems to show that stones had been re-used upside down and fresh recesses cut to correspond ; and it was noted that in one of the stones with recesses cut on two faces part of one of these faces was broken

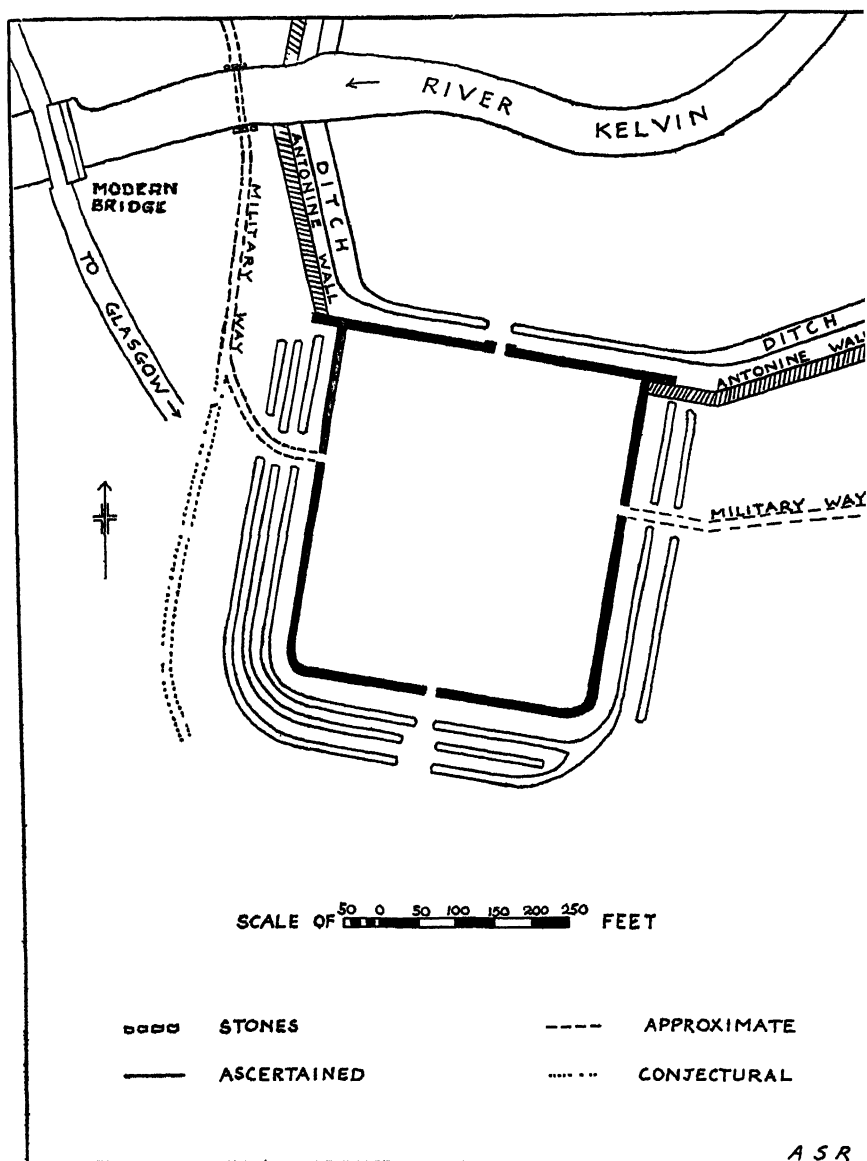
¹ Cordial acknowledgment is due to Mr. A. G. Ingham, Chief Engineer of the Department of Agriculture for Scotland, for ensuring the safeguarding of the material and for helpful co-operation. Repeated visits were made to the site by Miss Anne Robertson, representing the Hunterian Museum, where the timber and a selection of the stones have been deposited by the kind permission of the owners of the land on each side of the river—Keir and Cawder Estates and Garscube Estates. Acknowledgment is also due to Mr James Monterth for making a careful examination of the material on the site and for valuable help in the interpretation of it.

² Miller, *The Roman Fort at Balmuldy*, p. 17.



Photo A. F. Gray

STONES FROM ROMAN BRIDGE ACROSS KELVIN AT SUMNERSTON



SITE OF ROMAN BRIDGE CARRYING MILITARY WAY OF ANTONINE WALL ACROSS KELVIN AT BALMULDY FORT, SUMMERSTON

away, the damage extending to the (single) recess cut in it. This indication of rebuilding may have some relation to the evidence of destruction and restoration found in the adjoining fort, as in the other excavated forts of the Antonine Limes.

Many of the stones were dredged up alongside the banks, and one or two not so displaced lay at the water's edge, apparently in their original position. This points to abutments built up to the height of the banks, now about 6 ft.

Stones were dredged up, however, in a fairly continuous and uniform stream across the whole bed of the river. Some of them may have fallen forward from the abutments. A few, however, were obtuse-angled stones which can hardly have come from the abutments. It is very improbable, for example, that these had been corner stones of abutments projecting into the water with retiring sides, like the abutments of the bridge over the North Tyne at Chollerford, for there would be no reason to build projecting abutments in a stream so narrow as the Kelvin at this point.

Nor is it probable that these obtuse-angled stones had been diagonally opposite corner-stones of the abutments of a skew bridge. There is nothing in the relation of the Military Way to the site chosen for the crossing of the stream (Plate XXXIII) to suggest such a bridge. The only apparent reason for it would be a desire to keep the bridge-ends equidistant from the Wall-ends on the two banks. This would mean that the bridge would have to be built slightly askew, owing to the change at the river in the setting-out of the line of the Wall from a few degrees west of north to a few degrees east of north (Plate XXXIII). But it does not seem likely that the Roman engineers would have departed from their usual practice and adopted the more difficult type of structure merely to keep a uniform distance between bridge and Wall-ends on both banks. Nor is it supported by such evidence as is available. In each of the obtuse-angled stones the obtuse angle is 120° , which, in the 73-ft. width of the stream, would mean a deviation of about 40 ft. from the direct line across, whereas the deviation necessary to keep the bridge-ends equidistant from the Wall-ends on the two banks would be only 30 ft. In this connection the position of the stones as deposited on the banks can fairly be taken into account, since this corresponded approximately to the position in

the river-bed from which they were dredged up. The two heaps were within 5 ft. of being equidistant from the modern aqueduct and road-bridge which cross at right angles some 70 yds. down a straight length of the stream, whereas the heap on the north bank was 15 ft. further away from the inner face of the Wall than that on the south bank (Plate XXXIII). That is exactly what one would expect if the bridge went straight across without regard to the changed alinement of the Wall. It may be added that the obtuse-angled stones were not accompanied by any corresponding acute-angled stones such as would form the corners of the other diagonal of the skew.

The probable explanation of the obtuse-angled stones is indicated by the fact that some fragments of piles with pointed ends were dredged up with them. The presence of wooden piles accompanied by large blocks of stone is a regular occurrence on the sites of Roman bridges all over northern Europe, where the normal practice was to support the superstructure of permanent bridges on stone piers resting on pile foundations, with cut-waters facing both ways (in tidal water) or up-stream only. That the bridge at Summerston was designed as a permanent bridge is obvious from the stonework, and there can be no doubt that here, as elsewhere, the occurrence together of piles and massive blocks of stone indicates a substructure of piles supporting a stone pier (or piers). That being so, the most natural explanation of the obtuse-angled stones is that they had been corner-stones of a cut-water.

None of the stones was of the *voussoir* type. That, with the analogy of similar structures elsewhere, indicates that the platform of the bridge had been of timber.

The present diameter of the piles varies from 4 to 7 in. ; the longest of the fragments measures 3 ft. The other fragments of timber are too small to indicate the purpose for which they had been used, or even to show whether they had belonged to the superstructure or to the framing of the pilework. On general grounds, and from the record of timberwork discovered on the sites of Roman bridges, the latter is much the more probable alternative. One fragment, 2 ft. 4 in. long, is part of an oak beam, three-quarter round in section, 5 in. thick, and 6 in. wide across the flat face, which shows two circular holes, 3-4 in. in diameter, passing

through it vertically 17 in. apart, though the better preserved of these suggests that originally it may not have passed through the beam but may have been a recess cut to half its thickness, that is, to a depth of $2\frac{1}{2}$ in. At first sight the fragment suggests a parapet rail, but a parapet with

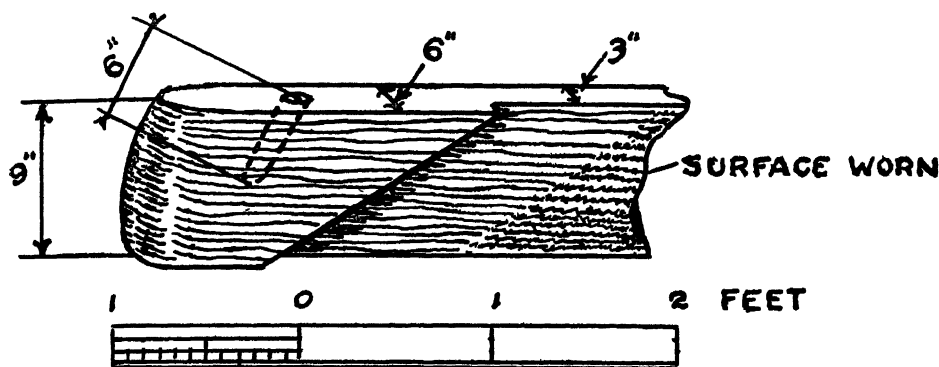


FIG. 6. TIMBER FROM ROMAN BRIDGE ACROSS KELVIN

rounded uprights, 3-4 in. in diameter, at intervals of 17 in. would be an unnecessarily troublesome structure to make and fit, and it would be too open to serve as a breastwork, as the parapet was probably designed to do (see below). Possibly the beam had belonged to the framing of the pilework, with piles passed through it to pin it down to the river-bed, as in the bridge at Mayence,¹ or mortised into it.

Another fragment, 2 ft. 9 in. long, is part of a squared beam, 9 in. wide by 6 in. thick (for the details that follow see Fig. 6). Across the 9 in. face a grooved recess, 3 in. deep (that is, half the thickness of the beam), runs obliquely at an angle of 60° from the vertical. The groove has been at least 6 in. wide: its exact width cannot now be told, one side of it being worn away. At a distance of 12 in. from its surviving side, but on the 6-in. face, a circular recess, 2 in. in diameter, has been cut obliquely to a depth of 6 in. The fragment thus indicates an oblique junction or

¹ Schumacher, *Mainzer Zeitschrift*, i (1906), p. 25.

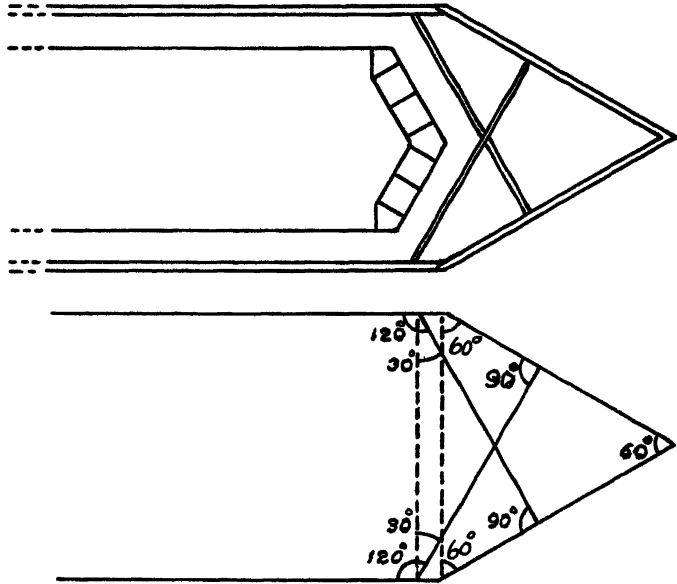


FIG 7 FRAMING OF PILEWORK OF BRIDGE (RECONSTRUCTED)

crossing of two beams, reinforced by a stay (or stays). Regarded as part of the superstructure, this suggests cross-trusses supporting the platform. As part of the framing of the pilework, it would fit into the junction of the cut-water with the rectangular part of the structure, in which case the angle between these would be 150° . If the stones described above as showing an obtuse angle of 120° were corner stones at this junction, the place here suggested for the obliquely grooved beam would mean that the framed pilework of the cut-water had projected beyond the stonework.¹

As deposited on the banks, the spread of stones on the south side began 200 ft., and that on the north side 205 ft., east of the aqueduct which accompanies the modern road bridge across the river. The

¹ As shown by Krauss for the piers of the bridge at Cologne, *Bonner Jahrbücher*, 130 (1925), p. 246, Abb. 2.

corresponding measurements for the line of the inner or western face of the Wall are 250 ft. and 285 ft. (Plate XXXIII). As the stones lay on the banks (with one or two outliers ignored), they occupied a width of 20-24 ft. From that it would appear, when allowance is made for the spread out of the stones as the structure collapsed, and again when they were dredged up and hoisted on to the banks, that the width of the faces of the abutments, or at least the extent of the lateral faces of the pier (or piers), must have been well under 20 ft. In that case the Military Way cannot have been carried over the stream at its full width of 17 ft., and indeed the bridge may not have been more than 12-14 ft. wide.¹ If we assume a bridge of that width to have lain centrally in the 20-24 feet over which the stones were spread, the distance of the bridge from the Wall on the south bank would be little more than 30 ft. That is only an approximation, but with the most liberal allowance for error it remains certain that the Military Way, normally 40-50 yds. distant, was brought close up to the Wall at the crossing of the river.

The reason why, in bridging the river, the Military Way was brought close up to the Wall would be to secure that the bridge with its parapet should provide a barrier to fill the gap in the Wall, while the Military Way, in this position, could take the place of the rampart-walk of the Wall for patrolling purposes. On each bank, presumably, there would be an ascent from the Military Way to the rampart-walk in the interval between the two structures.

It has been suggested that the road down Clydesdale may have had its terminus (or one of its termini) on the Limes at Balmuildy.² The fort here seems to have been an important one in the Antonine period, sharing with Castlecary alone among the Wall-forts the distinction of having a rampart of stone. If, at this point, the Military Way received traffic from the south, as well as from the east and west, that would help

¹ In this respect the evidence, such as it is, suggests a bridge analogous to those of Roman Gaul (see Grenier, *Archéologie gallo-romaine*, II, p. 195), and contrasting as much in width as in other dimensions with the extensive structures required to carry military roads (not much wider than our Military Way) at their full width over the Rhine and the Main (for the dimensions see Gundel, *Germania*, VI (1923), p. 73, and *Der obergermanisch-rätische Limes des Römerreiches*, Abt. A, III, 'Die Mainübergänge', p. 139).

² Miller, *The Roman Fort at Balmuildy*, pp. 2-3.

to explain not only the importance of the adjoining fort but also the massiveness of the stonework of the bridge.¹

But there is another consideration to be borne in mind. Native traffic from the north-west through the Blane-valley gap may well have crossed the frontier at this point.² The bridge here, lying under the protection of the adjoining fort, would offer a convenient and secure means of canalizing and controlling such traffic. On the north bank of the stream there may have been a passage through the Wall, with a guardhouse, perhaps in the form of a tower. Excavation on the sites of the abutments and between them and the Wall-ends, besides showing how the turf structure of the Wall was finished off and retained on each bank and how its rampart-walk was connected with the Military Way at the bridge-ends, might well reveal traces of such a guardhouse and perhaps of other connected structures.

¹ It may be noted here, as an indication of decorative treatment, that the stones dredged up included one with a fragment of an ornamental moulding cut on it

² Miller, *op. cit.*, p. 3.

III

FORTS

FROM THE ESK TO DALMAKETHAR

By J. K. ST. JOSEPH

The permanent stations occurring along the roads which have been described fall into two classes—forts with an area covering some acres, such as were usually garrisoned by auxiliary regiments, and small fortified posts with an interior area of about one-fifth of an acre or less. The forts are so placed as to guard important river crossings and other strategic points ; the sites selected for the smaller posts seem to indicate that these played an essential part in the signalling system. Along with the permanent stations we can conveniently consider the few known examples of temporary camps which mark the movement of bodies of troops of varying strength through south-western Scotland.

Seven miles north of Hadrian's Wall the Roman road crosses the Esk, and it may be conjectured that the passage of so large a river would not be left unguarded. Hereabout, however, the exact course of the road is too uncertain for the treatment of the crossing to be discussed with any confidence. The fort at Netherby, about $3\frac{1}{2}$ miles away on a branch road, seems too distant to have afforded the necessary protection.

BIRRENS

The fort at Birrens lies at a distance of 18 miles from Stanwix, measured along the line of the Roman road. Gordon, Horsley and Maitland recorded inscriptions and coins from this site, and it was Horsley who first proposed its identification with the Blatobulgium of the *Anonine Itinerary*. A valuable plan was made by Roy about 1753 and published in his *Military Antiquities*. It was the first fort to be excavated in the great programme of work begun by the Society of Antiquaries of

Scotland in 1895, and recently the site has been re-examined by Mr. E. B. Birley.¹

That it is possible to add, in important particulars, to our knowledge of a site that has already been so thoroughly explored is a measure of the help afforded to archaeology by air-photography. In June 1939, there were clearly visible from the air not only the defences of the known fort but also the outline of another enclosure (Plate XXXIV) in the field to the west (D. lviii, 1, 1447). This is undoubtedly the more westerly of the two enclosures planned by Roy (Plate XXXV, A)², but their different orientation and the apparent impingement of their adjacent sides, as seen in the air-photograph, led the writer to suggest³ that the western enclosure was not laid out, as might appear from Roy's plan, as an annexe to the fort lying to the east of it, but was itself by origin an independent and earlier fort. It may be conjectured that it is of Flavian date, for the earliest structures on the eastern site recognized as belonging to a Roman fort date apparently from the time of Hadrian.⁴

Our knowledge of the remains at Birrens was further enlarged by an air-survey in July 1946. The structures then revealed for the first time will be dealt with in a future publication, but it may be mentioned here that two ditches of the west side of what seemed to be a fort were shown to run across the western enclosure in a north-south direction, and to be on a line and (apparently) of a length which implied that the work they belonged to was also impinged upon by the eastern fort, which would therefore appear to have been preceded by two successive forts.

In agreement with Roy's plan (Plate XXXV, A) the Roman road seems to have crossed the western enclosure obliquely to pass through a gap (? gate) in its northern defences, but further excavation is required to

¹ *Itin. Sept.*, p. 18, Pl. 11; *Brit. Rom.*, pp. 114-5, 207, 341-2, *Hist. of Scotland*, 1, p. 191; *Milit. Ant.*, pp. 118-9 and Pl. xxiv, Christison, Barbour and J. Macdonald, *Proc. Soc. Ant. Scot.*, xxx, 1896, pp. 81-199, Birley, *ibid.*, lxxii, 1938, pp. 275-347; cf. G. Macdonald, *ibid.*, lxxiii, 1939, pp. 254-72.

² Cf. Matland, *Hist. of Scotland*, 1, pp. 191-2 'This fortress . . . consists of two parts . . . the western part fortified with triple ramparts and ditches'.

³ See O. G. S. Crawford, 'Air Reconnaissance of Roman Scotland', *Antiquity*, xiii, 1939, p. 286.

⁴ E. B. Birley, *loc. cit.*

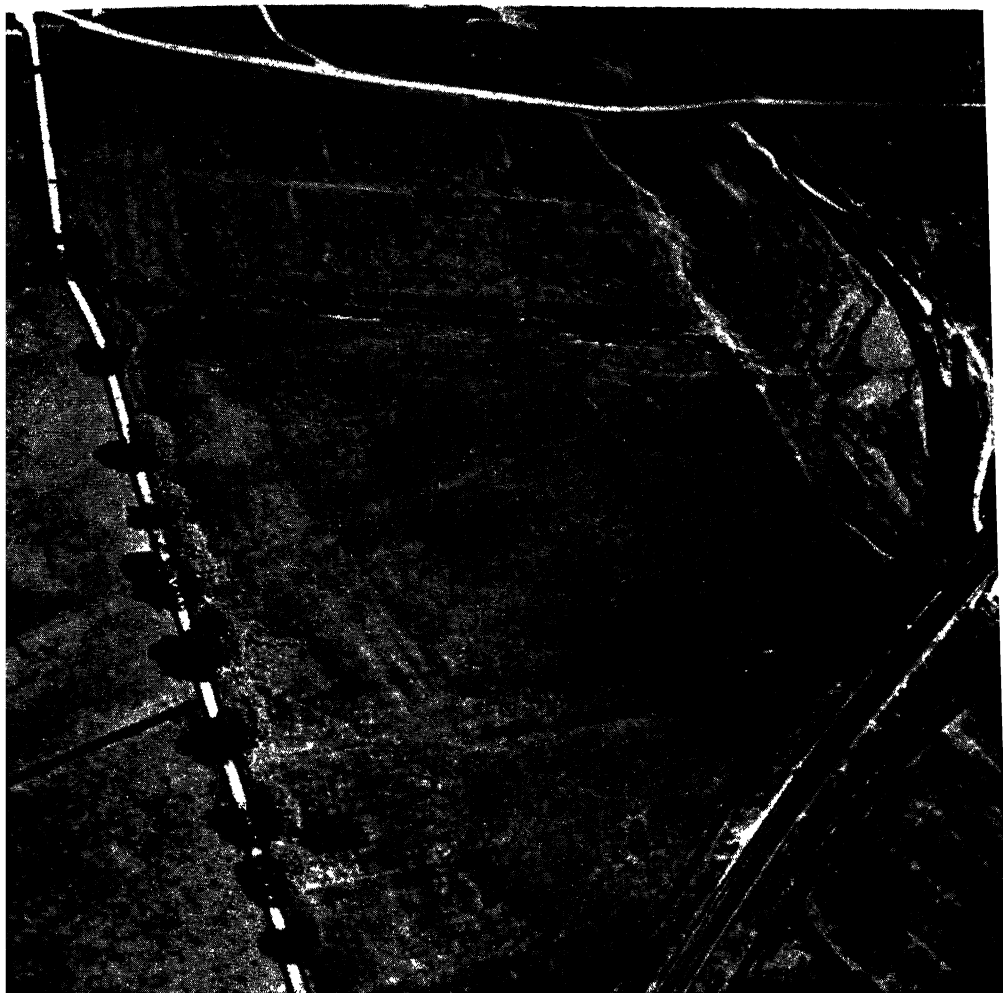
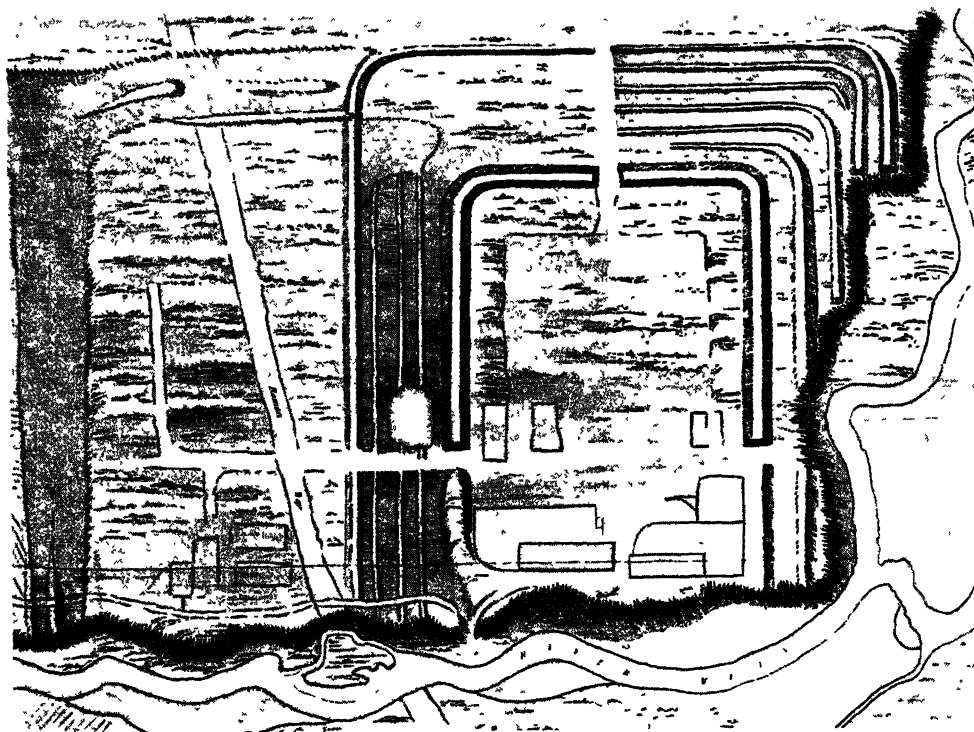


Photo C G M Almg

ROMAN FORT AT BIRRENS, WITH REMAINS OF ANOTHER ROMAN ENCLOSURE VISIBLE
IN FOREGROUND, LOOKING EAST

PLATE XXXV



A ROY'S PLAN OF ROMAN WORKS AT BIRRENS (*Military Antiquities*, Pl xxiv)



B EARTHWORK AT FAIRHOLM (from Roy, *Military Antiquities*, Pl. vii)

decide if this was the original course of the road and to determine the relative dates of road and forts.

BURNSWARK

Three miles from Birrens the Roman road passes the isolated hill of Burnswark, the summit of which is occupied by a native fort, while a Roman camp of some 13 acres lies on its south-eastern slope, and another of about 8 acres on its north-western slope. From the excavations carried out by Mr. J. Barbour in 1898¹ it can be inferred that a small earthwork included within the north angle of the south-east camp is earlier than the camp. It corresponds in size to the posts at Dalmakethar and Tassiesholm (Milton) further north, but it lies at a greater distance, nearly one third of a mile, from the road.

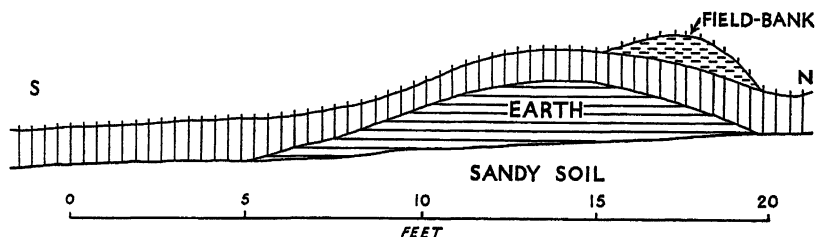


FIG 8 SECTION THROUGH EARTHWORK NEAR BURNSWARK COTTAGE

The rectangular earthwork, enclosing an area formerly cultivated, that appears in the left foreground of Plate XXXVI resembles a marching camp in its proportions and plan, and its south angle, which lies within an old plantation, is rounded like the angles of a Roman camp. Two trial-trenches² showed that the existing field-bank responsible for the sharp outline visible to-day was set atop an older and broader earthen mound (Fig. 8), but there was no accompanying ditch nor any evidence of date.

¹ *Proc Soc Ant. Scot*, xxxiii, 1899, pp. 198-249, with full account of earlier descriptions.

² These were dug at 20 and 32 paces east of the wall round the old plantation. The north angle of the enclosure and the south-west side of the adjoining camp appear to overlap.

Trial trenching undertaken by R. G. Collingwood in 1925 appeared to him to indicate that the camp on the north-west slope had never been finished,¹ but the aerial view shown on Plate XXXVII suggests that the rampart was formerly continuous, even if it was not everywhere of the same dimensions as on the south side. A trench dug by the writer through the north rampart about 150 feet from the north-west angle disclosed clean red clay standing to a height of 12 inches upon two or three courses of laid turf. The west half of this fortified area is narrower and less regular than the east half. In a bird's-eye view the ramparts of the east half appear to form three sides of a square, as if a work originally intended to measure some 400 feet each way had been enlarged by an irregular extension westwards; but trial trenches dug to test this conjecture failed to find any filled-in ditch on a north-west to south-east alignment in the midway position.

FAIRHOLM

About $4\frac{1}{2}$ miles ahead, near Fairholm farm, west of Lockerbie, lies a small earthwork which, to judge by a plan of it (Plate XXXV, B) given by Roy, appears to be Roman. Roy's plan shows that the works were in good order in 1769, but they have since suffered extensively from ploughing and perhaps deliberate levelling, so that to-day only the square platform of the site is visible and that but faintly.² The position lies at the gateway to the hills, which may be entered along the valleys of Dryfe and Annan. Besides these valleys the extensive view includes the hill-ranges north-westwards towards Queensberry, while the summit of Burnswark is also in sight.

A long trench (Plate XXXVIII)³ dug across a low bank which seemed

¹ *Dumfries and Galloway Nat. Hist. and. Arch. Soc. Trans.*, 3rd ser., xiii, 1927, pp 46-58.

² Roy's plan was copied in the 1863 edition of the large-scale Ordnance Maps (D 11, NW); cf. *Inventory of the Royal Comm. on Ancient and Hist. Mons., County of Dumfries* (1920), p 48, No 124 (no description). Mr. I. A. Richmond and Mr. James McIntyre have kindly confirmed the account of the surface features of Fairholm and Torwood from independent observations made in 1936

³ For permission to dig thanks are due to Mr John Kelly and Mr. Jackson, tenant

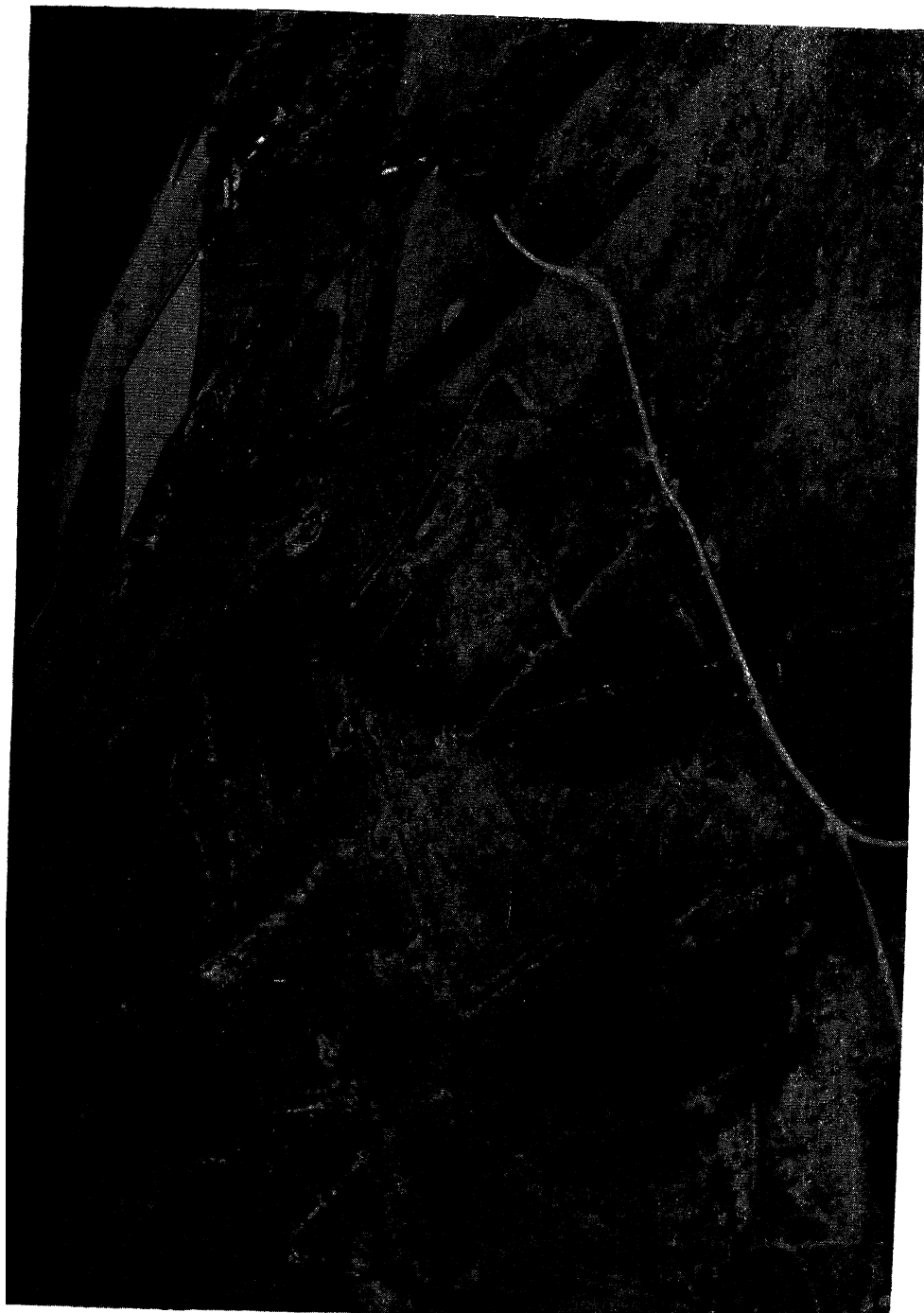


Photo C G M Alington

THE 'SOUTH CAMP', BURNSWARK, LOOKING NORTH

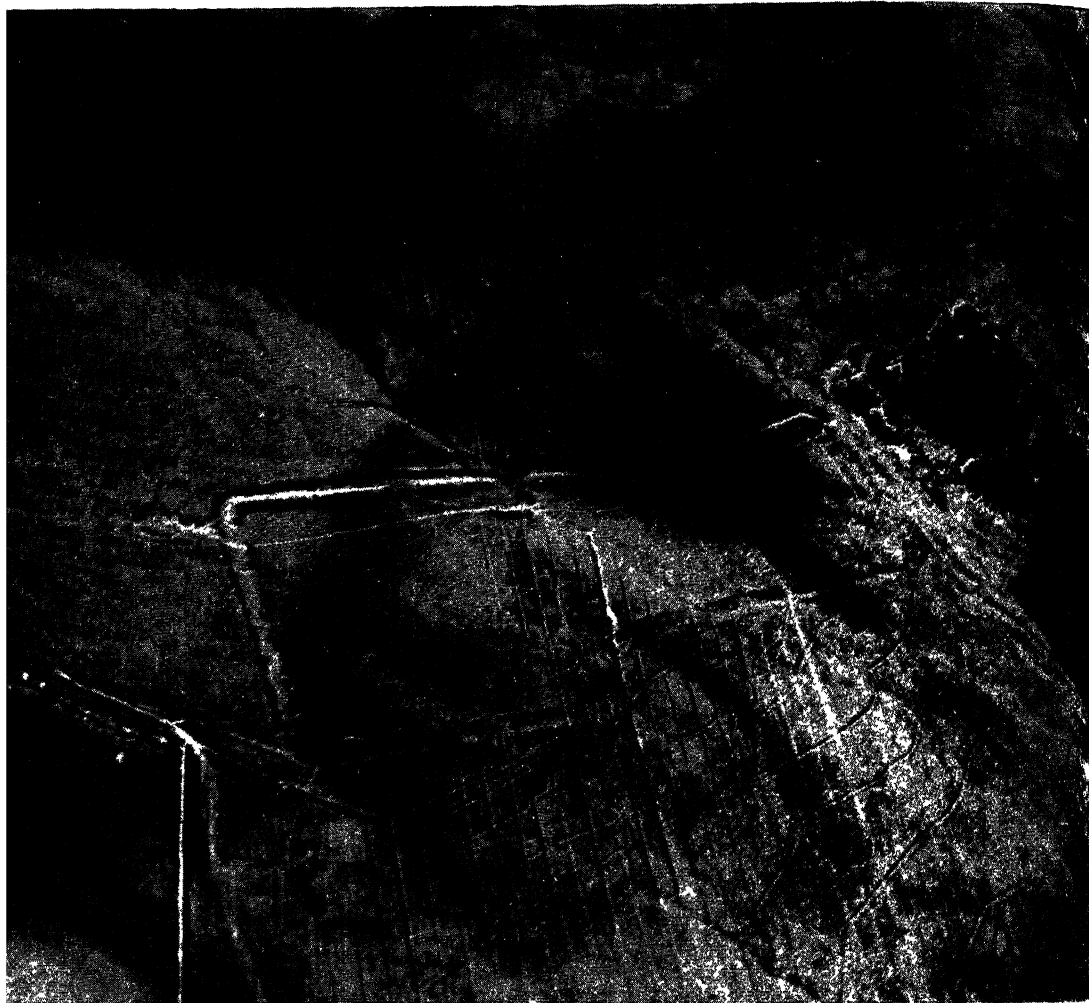


Photo C G M 4th.

THE 'NORTH CAMP', BURNSWARK, LOOKING SOUTH

to represent the defences on the north side disclosed a single V-shaped ditch, 5 feet deep and 16 feet wide, and, beyond a narrow berm, the base of a turf rampart, $14\frac{1}{2}$ feet in width. The back of the rampart ended vertically beside a trench, 16 inches wide, packed with heavy stones; and two small parallel trenches were encountered at intervals of 5 and 4 feet. The turf-work had been greatly reduced by ploughing, while further south all the occupation-layers had been removed, so that less than 12 inches of soil remained above the hard gravel. The rampart extended from the edge of the scarp eastwards for 75 feet, when it curved round to the south (Fig. 9). Here 18 inches of laid turf-work stood on a layer of peaty material like marsh-accumulation, such as might be found

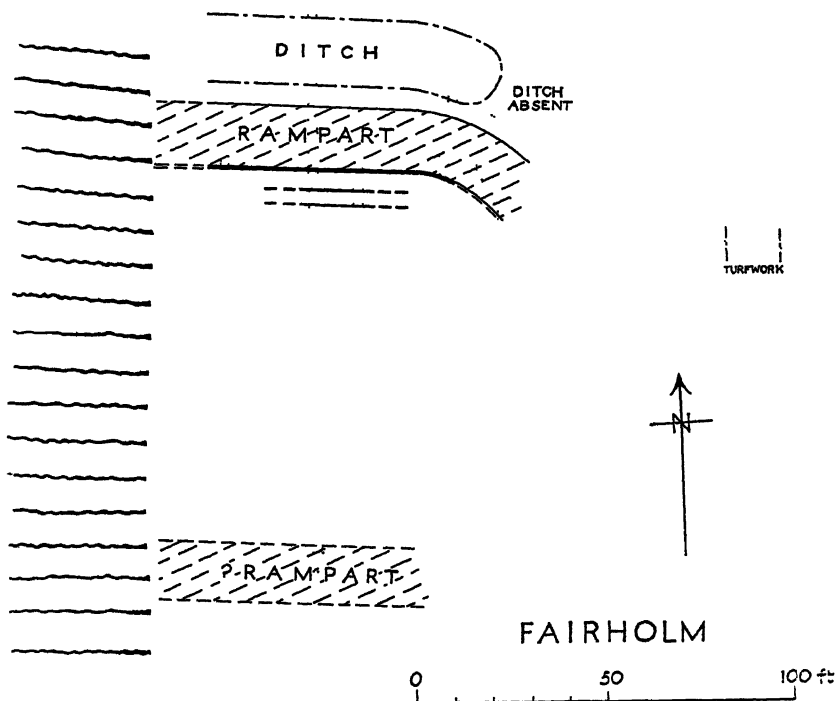


FIG 9. PLAN OF EARTHWORK AT FAIRHOLM

in an ill-drained hollow on the glacial gravel. At a slight rise that appears to mark the position of the south rampart trial-trenches failed to disclose any trace of turf-work. The west rampart seems to have slipped down the slope, but the original east-west dimension may be estimated at about 110 feet over the rampart-centres, and a similar distance separated the north and south ramparts, if Roy's plan may be taken as a guide to what has since been destroyed.

The sole object recovered from the site was an oyster-shell, but charcoal scattered about the gravel indicated an occupation-layer that had been almost wholly ploughed away. Possibly occupation-levels are undisturbed at the east margin of the enclosure, where a greater depth of soil remains.

As viewed from the air in 1946 the enclosure had more the appearance of a polygon than of Roy's square. On the other hand, the V-shaped ditch, the turf rampart, and the small trenches, apparently sleeper-trenches, are all typical of Roman construction, while Roy's plan shows that the dimensions are not much greater than those of the fortlet at Milton (p. 105). The position above the marshy valley of the Kirk Burn is well chosen, for nowhere else beside the road is there a site better suited for the guarding of the entrance to Dryfesdale and with a better command of the long-distance views necessary for signalling.

A trial trench dug across a slight hump 110 feet east of the main section disclosed laid turf-work standing to a height of 12 inches, which appeared to extend in a north and south direction. This is too far away to have formed part of the earthwork on Roy's plan, and further digging can alone establish of what structure it formed a part. Meanwhile it may be noted that Fairholm lies at a communication-centre. Hereabout a road branched westwards to Nithsdale (p. 45), while Dryfesdale offers a good line of communication to the north-east, leading to the fort at Raeburnfoot, from which we now know that a Roman road ran, in a continuation of this line, towards Newstead. On such a site it would be very reasonable to suppose there may have been a fort.

Dr. Kathleen Blackburn has kindly examined a sample of the outlying turf-work, and her report gives an interesting picture of the vegetation of the district in Roman times :—

This sample is composed of turves with only the thinnest layer of peat. The tree vegetation is preponderantly alder, with a large proportion of hazel shrub, a little birch, and a minute quantity of pine, the last probably blown from a distance. The tree-pollen, however, is not very plentiful, suggesting that the trees were only scattered. By far the most conspicuous part of the vegetation is certainly heaths, associated with club-mosses, polypody and other ferns, devil's-bit, scabious and ragged-robin. There is also much marsh cinquefoil and a little sphagnum. The dandelion and thistle are present. The picture which this suggests is consistent with the natural configuration of glacial hillocks rising from an ill-drained valley-floor. The turf will thus have been collected from the slope immediately below the site. Had it come from the valley floor the peat would have been thicker.

TORWOOD

Three furlongs north-west of Fairholm, on Torwood Muir, lies a large marching-camp discovered by Roy.¹ The open heath of 1769 has long since given place to tillage, and the rampart and ditch are now confused by field boundaries. The rampart is best preserved in the small triangular extension to the south end of Duke's Wood and at the north-west angle of the camp, where the mound is 14 feet wide. At 212 and 347 paces south of this angle, just within the plantation, lie the two *tutuli* planned by Roy, measuring 36 feet in length, while the course of the rampart on this (the west) side is marked by the hedge along the west margin of fields D. li, 1, 579-80. The position of the ditch at the south-west angle and along part of the south side was visible from the air in June 1939 as a green line across parched grass.² This angle lies near the top of Comfortland Hill, much further north than the line marked on the Ordnance Map. If Roy's conjectural position of the east side be accepted, the dimensions of the camp will have been about 1550 by 1000 feet, giving an area of some 35½ acres.

DALMAKETHAR

The earthwork at Dalmakethar³ is seven miles further north. It stands on the top of a long glacial ridge rising above the middle of the Annan

¹ *Milit. Ant.*, p. 61, and Pl. vii; cf. J. Macdonald, *Proc. Soc. Ant. Scot.*, xxviii, 1894, pp. 310-11.

² *Antiquity*, xiii, 1939, p. 284, Pl. iii, B.

³ Though nearer to Girthhead, the site lies on Dalmakethar farm, and that name is adopted here.

valley. On the west a steep bank leads down to the river, while the ground on the east slopes towards a small burn. The east and west sides are both about 160 feet long, the measurement being taken from the centre of the south rampart to the centre of the outer of two mounds along the north side; from centre to centre of the east and west ramparts the south side measures 90 feet, the north side about 116 feet, so that the enclosure widens appreciably northwards. The single entrance, which is on the east side, lies some yards north of the centre position. This 'small redoubt' was noted by Roy¹ in his survey of Annandale, but according to the most recent description, that in the *Inventory of the Royal Commission on Ancient Monuments*,² the fort 'does not show any features suggestive of Roman castrametation.'

To-day the rampart stands generally two or three feet high, while a very slight hollow marks the ditch on the south and east sides. A section (Plate XXXVIII)³ was cut through the south defences 45 feet west of the south-east angle. This disclosed a ditch excavated in hard glacial gravel and filled with silt, V-shaped but with a broad shelf cut into its inner slope, as if to supply the place of a berm.⁴ The rampart, which appeared to stand on a natural hummock, was of sand. This had slid forward in two wedges towards the ditch, and had also spread backwards, making the original width difficult to determine, but it may be estimated at about 23 feet. The sand had not come from the ditch but had been gathered elsewhere on the site; similar material was encountered in a road-section (Plate XXXVIII) down the slope to the east. Above the sand a 6-inch band of laminated, greyish, silty material resembled laid turf-work that had been heavily leached; a string-course in turf would greatly strengthen a rampart of sand, for it would be difficult to maintain steep slopes to front

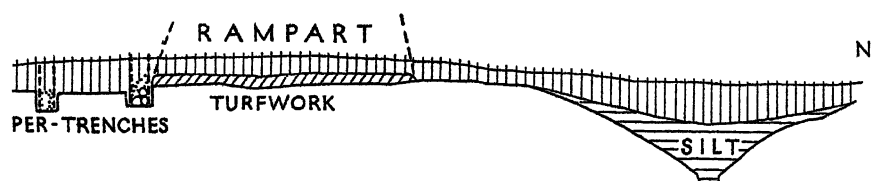
¹ *Milt Ant*, p 104, cf. Chalmers, *Caledonia*, 1, pp 134, 153, Christison, *Proc. Soc. Ant. Scot.*, xxv, p 246.

² *County of Dumfries*, p. 6, No 19.

³ For permission to excavate on the Castle Milk Estate acknowledgment is made to Sir John Jardine, Mr Atkinson Clark, factor, and Mr A M Wilson, tenant of Dalmakethar farm.

⁴ Cf. the Ardoch sections, *Proc. Soc. Ant. Scot.*, xxxii, 1898, Pl vi, Nos. 4 and 5. There, indeed, it looks as if the front of the rampart had been stepped down on to the back (paved) part of the shelf. This (the east) side of the Ardoch defences was on (gently) sloping ground, like the south side of Dalmakethar.

PLATE XXXVIII



and rear in so loose a material. Behind the rampart 14 inches of earth remained above the hard glacial clay and gravel, but there were no traces of occupation-earth or of structures. A partial section (Plate XXXVIII) through the east defences disclosed a ditch, 9 feet wide, with a profile approximately V-shaped, in front of a rampart of sand and gravel.

In the absence of small finds the evidence for the character of the earthwork consists in its situation, its relation to the Roman road, its plan and construction. The distance from Fairholm (7 miles) is a normal interval. The site lies on a ridge-top at the best point to command wide views along the valley. The Roman road, approaching from the south along the crest of the ridge, inclines to the east about 70 yards from the earthwork, which it passes at a distance of 75 feet, and the single gateway of the earthwork is in the east rampart, thus giving direct access to the road. The dimensions of the enclosure agree with the corresponding measurements at Tassiesholm (Milton) and Durisdeer. On the other hand, the remains as they now stand present certain features that do not suggest a Roman date. There is the irregularity of shape referred to above.¹ On the east side there is an outward expansion of the rampart to the extent of about 10 feet, and for a length of about 10 feet, on either side of the gateway; this expansion, which is comparatively sharp and unweathered in its slopes, does not look like Roman work. Nor is it easy to explain the presence on the north side of two low parallel mounds (the outer rather over-emphasized by a slight scarp due to ploughing) which together measure some 55 feet across—a width quite out of proportion to the rest of the defences. A trial trench showed both humps to consist of clean sandy soil like the south rampart. The ditch found in the sections on other sides of the fortlet was not encountered in this trench; it may have lain beyond the end of the trench and therefore outside the outer of the two mounds. But further excavation is required to determine the original lay-out of the defences on this side, and until that is done no satisfactory explanation can be given of the remains as they now stand. If the earthwork is Roman by origin, it has undergone some subsequent modifications.

¹ See the air-photograph in *Antiquity*, xiii, 1939, p. 282, Pl. II. A.

MILTON (TASSIESHOLM)

By JOHN CLARKE

The site lies about a mile south of the village of Beattock within the land of the farm of Milton. It lies across the crest of a low ridge running down the middle of the Annan valley and enjoys a wide prospect, especially to the north-west. Roy gave it the name of Tassiesholm from an adjoining hamlet, but to-day both name and hamlet are forgotten, and it may save confusion if the site is referred to by the name of the farm, Milton, within the land of which it is situated.

Here Roy noted certain remains for which he suggested a Roman origin. His plan¹ shows a small, single-gated 'redoubt' and, close to it, the corner of another enclosure, which he conjecturally completed to form a temporary marching-camp of over 50 acres. Surface examination of the site found the remains little obliterated since Roy's day, and, in spite of the scepticism with which his attribution of a Roman origin has been regarded,² they appeared to be of sufficiently Roman aspect to justify examination by the spade.³

Only towards the end of the excavations was a cut made across the defences of the larger enclosure—with results which, as we shall see, render further exploration imperative. Work was concentrated mainly upon the small enclosure, partly because its size rendered it a more suitable subject for excavation with the limited means at our disposal, partly because, if Roman, it was of a type of structure not previously excavated in Scotland.

In describing this main excavation it will be convenient to summarise the results before descending to detail of doubtful points. The first few

¹ *Milt Ant*, Pl. viii

² J Macdonald, *Proc. Soc Ant Scot*, xxviii, 1894, pp 313-4; *Inventory of the Royal Comm. on Ancient and Hist Mons. of Scotland, County of Dumfries* (1920), No. 411

³ By the kind permission of Mr. John Henderson, factor of the Annandale Estates, and of Mr. Smith, tenant of Milton farm, work was begun on the site at Easter 1938, and resumed for short periods in April and August of the year following.

days' work proved the small enclosure to be indubitably Roman and suggested a dating within the Antonine period, a suggestion which was wholly confirmed as the work proceeded. There had been a single ditch, continuous except in front of the gateway and having a uniform width of 13 feet at every point examined. It appeared to be of regular V-shape, though this could not be confirmed with certainty because of flooding from numerous springs. The berm had a width of 14 feet. The rampart, 23 feet wide over the base, was kerbed internally and externally with large undressed stones, while a layer of smaller stones, $5\frac{1}{2}$ feet wide, extended towards the centre of the base from both kerbs. The internal dimensions of the enclosure, measured from the inner kerbs of the rampart, were 130 feet by 75 feet, giving an area of rather over one-fifth of an acre. The single gate, which was on the east side,¹ was $10\frac{1}{2}$ feet wide between its side post-holes. Here a paving of cobbles passed out to join a road which skirted the ditch on this side. This road, of which the bottoming was fairly intact, appeared to have been about 18 feet wide.

The general nature of the internal arrangement was quite clear (Plate XXXIX). Immediately inside the rampart a spread of cobbling, about 21 feet wide, ran from the gateway round the whole of the interior, leaving a free space, surfaced with gravel, down the centre. On the north side, lines of post-holes proved that the cobbled space had been occupied by a hut (or huts). No such coherent system was traceable on the south side, but occasional post-holes occurred suggesting structures similar to those more clearly defined on the north side; there were also patches of well-laid flagging. Similar flagging was found on the west side along with some fragments of window-glass, but here no post-holes were noted, and it is possible that the glass had come from the buildings inside the north and south ramparts. All over the cobbled area finds were comparatively numerous. In contrast, the gravelled space in the centre, little or nothing of which was left uncovered, not only presented no trace of structure at any point but yielded very few finds.

The finds, so far as they gave evidence of date, spoke with unanimous voice of the Antonine period. They included two Samian fragments, one of the form 18/31, one of a bowl (form 37) with acanthus decoration.

¹ In referring to the sides and corners of the enclosure it is assumed, for convenience, that the major axis runs from east to west. Actually it runs a little north of west.

Thirty-two fragments were recognised as belonging to cooking-pots ; all were plainly Antonine. General finds included amphorae fragments (in surprising quantity for so small a place), iron nails and staples, some clusters of hobnails from boots, an axe, some iron harness-pieces, part of the lock of a gate (found at the gateway in a layer of carbonized timber), a hone, a piece of blue melon-bead, and a diminutive jar. This last was found in a pit in the north-east corner. There was some evidence to indicate that the pit had been used as a latrine.

It remains to deal with less certain matters. And first the critical question of periods of occupation. On the north side a final period of occupation is represented by a system of post-holes and by the heavily cobbled surface, 10 inches thick, associated with them. Underneath this surface, and sealed by it, lay a fragment of a sleeper-trench system as shown in the plan (Plate XXXIX). Slight though the remains are, they hint at a structural arrangement similar to that defined by the post-holes. In any case they speak with sufficient clarity of a distinct and earlier period of occupation. The cobbling, extending beyond the post-holes line on the rampart side, also sealed two fire-holes just behind the rampart kerb ; from these too, fragments of Antonine pottery were recovered. It may be said, therefore, that here the evidence indicates two periods of occupation, both of them Antonine, the later one being prefaced by complete reconstruction.

In the gateway, when the cobbled paving was removed, another layer of cobbles, more closely rammed, was found beneath. If this represents an earlier street-surface, as it well may, it would fit in naturally as contemporary with the earlier of the occupations for which there is evidence inside the north rampart.

Whereas the cobbling inside the north rampart was a compact mass, the cobbles on the south and west sides were set more loosely in black earthy debris, from 8 to 10 inches thick, full of wood, iron and miscellaneous pottery fragments. Under this cobbling there was a layer of compacted, deeply-burnt earth immediately behind the rampart on the south side ; in a corresponding position on the west side there was a distinct surface of gravel, itself spread upon cobbles. On both sides, further in from the rampart, this lower occupation-level was represented by remains of flagging, here and there showing signs of fire.

So far, this flagging underlying the top surface of cobbles corroborates the evidence noted elsewhere for two periods of occupation. It was found, however, that the flagging, in turn, rested upon a layer of black material, about 6 inches thick, similar to that in which the overlying cobbles were set but containing fewer pottery fragments. The question therefore arises whether this layer underlying the flagging represents an occupation earlier than either of the two for which there is evidence throughout the interior. Possibly it does, but, if so, one would have expected to find traces of such an occupation on the north side. No such traces were found, though careful search was made for them. Nor did the layer under the flagging give any indication of structures associated with it. It may simply represent a first phase of the earlier of the two occupations for which in the interior as a whole there is adequate evidence. In that case the history of the earthwork would link up with that of Castledykes and other sites in southern Scotland rather than with that of the forts on the Wall between Forth and Clyde, where three periods of occupation from 142 onwards are now firmly established.

The structure of the rampart can best be described as heterogeneous. In the main it consisted of turf with a considerable admixture of till and peat. The mixture was very confused, and the lamination was less clearly marked than is usual where turf has been employed. One got the impression that material of a miscellaneous kind had been incorporated in random fashion, as we shall see presently, there is reason to suspect that this is what actually did happen. Apart from its composition the rampart presented the notable feature that its stone bottoming did not rest on the natural till (a distinctive reddish-yellow substance locally known as 'todmill'): it rested on a layer, sometimes as much as 5 inches thick, of greyish turfy material mixed with heather stems. In general, the thickness of this layer diminished towards the outer kerb, but it was traceable even beyond the outer kerb over part of the berm as a greyish skin on the natural till. Within the interior also a thin layer of similar matter was noticed time and again just before the till appeared. Another curious feature of the interior was the presence here and there of pockets of turf underlying the earliest traces of occupation. These pockets were quite irregular in their disposition and size. Sometimes they were

quite small, sometimes they were as much as $2\frac{1}{2}$ feet across and sank 18 inches into the subsoil.

This general 'turf complex', if it can be so called, was the subject of much conjecture till the very end of the excavation, when a reasonable explanation of it was suggested by a trial trench dug through the defences of the larger enclosure. As we shall see, these defences consisted of a ditch and a turf rampart, and the evidence of the trench indicated not only that the ditch had been filled in but that the rampart had been demolished. For reasons to be noted presently it is certain that the larger enclosure had preceded the smaller, and the presumption is that its defences would be obliterated when the small post was constructed; its ditch ran inconveniently for the road which had to be laid out to serve the small enclosure, and its rampart would have afforded cover for an enemy in an ideal position for a final rush. When these facts were appreciated, a reasonable explanation of the 'turf complex' followed. Suppose the builders of the small post to have dismantled the earlier work. When the ditch was filled in, a considerable amount of rampart-material would still remain to be disposed of. What more natural than that it should have been used to prepare the site of the small post and to construct the new rampart? Such a procedure would explain the three puzzling features which have been described. It would explain the strange pockets of turf where no turf had any right to be; for the pockets would represent beds from which obtruding field-stones¹ had been removed, the beds being packed with surplus rampart-material. It would explain the curious layer of turf noted at many points of the site; for the layer would be a preliminary spread over the cleared natural surface. It would explain, finally, the confused structure of the rampart; for the re-used material would have lost its laminated structure in being torn from its original setting, and would be mixed with new material derived from a preliminary clearing of the new site and from ditch upcast.

As to the purpose of the small post it would be rash to be dogmatic until a number of analogous sites have been examined in some detail. Its size is such that it can hardly be conceived of as a unit in isolation;

¹ Such field-stones, many of them very large, are of common occurrence in the todmill; in the corner of the field in which the remains are situated there is a large accumulation of them, uprooted during the agricultural operations of many years.

rather it must have been one of a system of such posts. The most natural function they could have performed would be of a police nature in connection with the road. They may also have served as convenient road-houses, as it were, affording night shelter and protection as well as convoys to traffic using the road.

Close to the north-east angle of the small post lies a corner of the larger work—the only part of that enclosure that can be distinguished with certainty on the ground. At a point near this corner a single cut (A-B, Plate XXXIX) was made over the low mound and faint hollow that presumably indicated the rampart and ditch. The hollow proved to mark a ditch about 12 feet wide, while the mound marked the course of a rampart of turf on a heavy stone foundation. The ditch had been filled in with large stones and turf, so tightly rammed that to dislodge them was a heavy labour. This was clearly material from the base and body of the rampart, which was reduced almost to its foundation; and even that was so disturbed that no estimate of width was possible. If the evidence of that single cut can be accepted as representative, there was every indication that the defences of the larger enclosure had been deliberately obliterated.

Though no objects were recovered from the cut, the ditch and rampart, as it revealed them, left no doubt as to their Roman origin. They also seemed to imply, by their structural character, that the larger enclosure was not, as Roy conjectured, a temporary marching-camp, but a work laid out for permanent occupation. This gave an added importance to the question of sequence. As a glance at the plan will show, the road skirting the east side of the small post must have impinged upon the defences of the larger enclosure. We were thus forced to the conclusion that the enclosure belonged to a period anterior to that of this stretch of road and of the small post which it served. The small post, we have seen, is of Antonine date. How much earlier than the small post the larger enclosure was to be dated further excavation alone could determine. Accordingly, excavation was resumed in 1946. The work is being continued, and a detailed account of the results already acquired is therefore reserved for future publication.¹ It may be mentioned here, however

¹ By the Society. For interim reports see *Dumfriesshire and Galloway Trans.*, 3rd Ser., xxiv (1947), pp. 100-110, xxv (1948), pp. 10-26, and xxvi (1949) pp. 133-49

that the large enclosure which preceded the small Antonine post has been proved to have been a permanent work, whether fort or annexe, that two successive forts have been found to adjoin it on the north (see Plate V), and that over the whole of the newly excavated area the datable fragments of pottery so far recovered, some 40 in number, are all of the Flavian period.

FROM BEATTOCK TO CARLOPS¹

By J. K. St. JOSEPH

BEATTOCK

The Roman road, it has been explained (p. 17), crossed the Evan Water at Johnstone ford, 25 yards downstream from the site of Holms bridge. Immediately north of the river, in fields D. xvi, 15, 480 and 481, then in oats, air observation in August 1945 revealed a crop-marking which indicated a line of ditch, with gateway and *tutulus*, about 75 yards east of the road and parallel with it, marking out about 300 yards of the west side, with the north-west angle, of a marching-camp. An air survey in July of the following year showed most of the east side. On the south there appears to have been some erosion by the river. The surviving part of the camp appears to measure some 900 feet long by 575 feet broad, which gives a minimum area of about 12 acres. It looks as if the camp is smaller than Torwood (p. 101) and Little Clyde (p. 113). No traces of it were visible on the ground when the site was visited in August 1946.

REDSHAW BURN

In the most remote part of its course the Roman road passes Annandale Moss and swings over Divoty Knowes to enter Lanarkshire at Rowantree Grains,² three-quarters of a mile to the west of which the road crosses the two forks of Redshaw Burn. Near the second stream, opposite the point where the Roman road and hollow-way separate from the eighteenth-century metalled-road, a fortlet was observed from the air by Mr. O. G. S. Crawford in 1939. In the air-photograph shown on Plate

¹ For permission to dig on the Annandale Estates thanks are due to Mr. John Henderson, factor, and Mr W P Ward, tenant

² The existence of a fortlet here on the west of the road (Air-photograph C G M A. 42, cf *Antiquity*, xiii, 1939, p 282) has not been confirmed by examination on the ground. The markings in the air-photograph which suggest an earthwork are due to the differential colouring of grass and weeds.

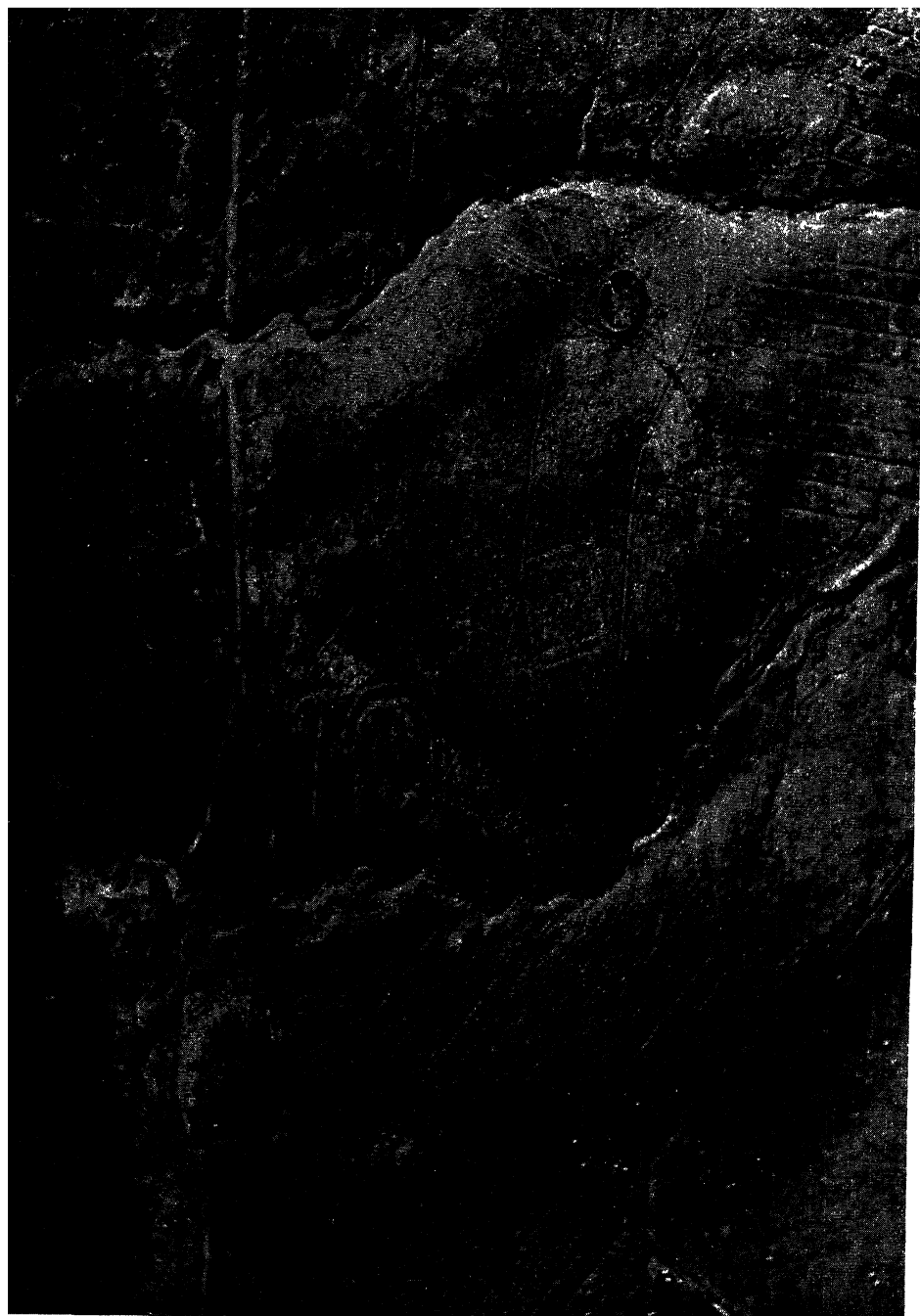


Photo C G M Atington

ROMAN FORTLET, REDSHAW BURN, LOOKING NORTH

agriculture. The dimensions of the camp are about 1475 by 975 feet. Intersected by two streams, and with its lower part laid across wet ground, it cannot have provided very comfortable quarters. In this mountainous country the Roman engineers have simply chosen the best site available for the temporary purpose for which the camp would be laid out.

CRAWFORD

The Roman fort at Crawford comes as a new discovery. One passage, indeed, in Roy's *Military Antiquities* seems almost prophetic : ' Advancing from this place [Tassiesholm], along the Roman way, into Clydesdale, search hath been made in the neighbourhood of Elwin Foot, and Crawford castle, for another camp, at the usual distance of a day's march, but hitherto without success. Neither have any vestiges been discovered near Culter or Biggar.'¹

Crawford lies at the middle of a great S-shaped bend in the Clyde, and is about halfway between Tassiesholm (Milton) to the south and the fort of Castledykes to the north.² Here a number of large side-streams enter the main valley, and this is the first point for many miles on the Annandale-Clydesdale road where there are signs of a large native population ; a number of irregular native works cluster on the hills around. Such considerations probably led the Romans to choose this locality, while the actual site, a level platform rising from the valley-floor by Crawford Castle, commands both reaches of the Clyde as well as the side-valleys of the Camps and Midlock Waters. The ground falls away to a small stream on the west, on the east to Camps Water, on the south to the Clyde, though the levels here have been altered by the road and the building of the Castle. To the north, marshy ground added to the strength of the position.

The fort has suffered much from agriculture and the builders of the Castle, but a terrace still marks the position of the ditch-system on the west side, while at the south-east angle, in a small copse, the rampart and ditch are quite distinct. Indeed all the rounded angles of

¹ *Milit. Ant.*, p. 61 The writer first visited the site at Crawford on 2nd Sept. 1938, and trial trenching was undertaken a fortnight later. Permission to dig was kindly granted by Mr Hadow, Castle Farm, the owner of the site

² The distance to Tassiesholm is 18 miles, to Castledykes 19 miles.

the fort are still visible. Over the rampart-centres the dimensions are about 315 feet from east to west by 240 from north to south, giving the enclosure an area of well under 2 acres (1·7).

A trench (Plate XXXVIII) dug across the west defences 60 feet north of the south-west angle disclosed a wide ditch, with large central mid-rib, excavated in hard gravel. The filling of the inner half of the ditch included spadefuls of tumbled turf-work and runnels of coarse sand. Beyond an 8-foot berm, a turf rampart, 17 feet wide, remained to a height of 2 feet. A width of 16 feet of heavy cobbles and gravel, covered with occupation-earth and ashes, seemed to mark the *intervallum*-road, while beyond some modern digging two layers of rubbish were encountered, each 6 inches thick, of which the lower yielded a flagon-neck, Roman but not closely dateable. Rough, tumbled stonework, perhaps marking stone-robbers' trenches, suggested that the fort had been equipped with permanent buildings of which the foundations at least were in masonry.

There will have been an east gate for direct access to the road, which here turns up the Camps Water on its way over the Raggengill Pass, while a hollow perhaps marks the position of a south gate. The road from Durisdeer probably crossed the Clyde within sight of the fort, perhaps by a bridge (of wood), as was customary with a river of this size.

BIGGAR

Tradition records that Biggar, 13½ miles from Crawford, was a Roman site, though the evidence is slender. 'The fort near the church' mentioned by Maitland¹ is doubtless the castle-mound in the garden of the manse at the west end of the town, where Roy recorded the finding of Roman coins.² The writer of the description of Biggar parish in the *New Statistical Account* reports the discovery about 1830 of 'a gold coin of the Emperor Vespasian in excellent preservation' when Biggar Cross-knowe was removed.³ This knoll lay in the main street, where the fountain now stands, opposite the Fleming Arms hotel.

This evidence is very slight, but it should not be dismissed without reference to the geography of the place. North of Lamington the Clyde

¹ *Hist. of Scotland*, 1, p 193; cf Gordon, *Itin Sept*, p 115.

² *Milit. Ant*, p 104, cf Chalmers, *Caledonia*, 1, pp 135, 155

³ *New Stat Account*, vi (1835), p 363, cf Stuart, *Caled Rom.*, p. 237.

valley widens towards the great right-angle turn in the river near Biggar. The marshes south of Biggar were of much wider extent in their undrained state and formed a serious obstacle to communication northward, so that medieval roads found it convenient to use the Roman causeway across this quaking moss.¹ The first firm ground that the road reaches on its way north to the Candy Burn valley is the terrace on which Biggar is built. Here the most advantageous position is the level platform extending for 220 yards from the fountain to where the High Street narrows as it bends northwards at the north-east end of the town. Of open ground, unoccupied by roads and houses, little now remains in this area, and the search for surface traces of earthworks is correspondingly restricted. A gentle swelling that runs through the kitchen-gardens some 75 feet north of North Back Road might mark the line of a rampart ; it is the only feature worth comment that the writer noted in a careful survey. The wide views that this site commands, both eastwards along the Biggar Water and south-westwards to the Clyde, as well as its sheltered position among the hills, would commend it to Roman surveyors.

CARLOPS

Near Carlops, midway in the thirty miles between Biggar and Inveresk, Gordon places a Roman encampment. 'About 17 miles from *Edinburgh* in the County of *Tweedale*, near a Village called *Romana*, upon the Water of *Line*, are to be seen the Vestiges of two square *Roman* Encampments ; one of these is about a Mile North-West from *Romana*, near the Dwelling-House of Mr. *Christy* of *Newhall*, and consists only of a single Ditch and Rampart, in Form of a Parallelogram ; its Dimensions and Area are much the same with *Ardoch* fort in *Strathallan*, but this is in some Places so flat and level, that I have not thought it necessary to exhibit its Draught.'² The present Newhall House, by Carlops, is 5 miles north of Romano, and no other seat of this name appears on Roy's survey of about 1750 or on the modern Ordnance sheets,³ while

¹ Cf. Roy's MS map of Scotland (about 1750), sheet 6/4.

² *Itn Sept.*, p. 114. 'The other square *Roman* Fort . . . is within a Furlong of the Kirk of *Line*.'

³ Roy's MS map, sheets 7/2 and 6/3 ; Ordnance Survey Maps, 6-inch scale, Peeblesshire v and u SE.

Gordon's own map is on too small a scale for the site to be identified exactly. It is the 'encampment a little north of Upper Whitefield' of which Armstrong knew of faint traces in 1775,¹ though this would place the work some $3\frac{1}{2}$ miles north of Romanno. Inquiry reveals no local tradition of this 'encampment', but Gordon's comparison with Ardoch suggests that it might be a fort. If so, its site may have been selected to control a branch route from the south by way of the Lyne Water, for it appears to be at some distance from the Biggar-Inveresk road along the Pentlands.

¹ Armstrong, *A Companion to the Map of the County of Peebles, or Tweeddale* (1775), p. 59. Cf Chalmers, *Caledonia*, 1, p. 158 and note (o) 'From this station [Lyne], distant nine miles, in Linton parish, there is a Roman camp, at Upper Whitefield, on the north.'

THREE NITHSDALE SITES

BY J. K. ST. JOSEPH

WARD LAW, CAERLAVEROCK

The Roman fort on Ward Law, six and a half miles south-south-east of Dumfries, was visited in 1772 by the naturalist Pennant, who thus refers to the site in his second *Tour*. 'Visit Wardlaw, a small hill with a round *British* camp, surrounded with two fosses, on the top; and on the south side the faint vestiges of a *Roman* camp, now much ploughed up. The prospect from this eminence is very fine.'¹ Pennant's 'south' is an error, for the fort lies immediately north of the native work, which is bounded on the south by a steep slope. It was known to the writer of the description of the parish of Caerlaverock in the old *Statistical Account* (1793); 'Not far west of this castle [Caerlaverock] rises the hill Wardlaw; on top of which, are yet visible, the vestiges of a Roman incampment, conjectured to be the Uxela of Ptolemy.'² Air observation in 1939 recovered the outline of this 'incampment', while an air survey in 1945, besides defining it more clearly, revealed, some 200 yards to the west, a smaller rectangular work, perhaps also Roman, enclosed by a single ditch.

Even to-day the rampart of the more easterly enclosure is marked for much of its course by a very faint mound, the cause of a gentle swelling in the plough-rigs. Occupying the south end of a ridge between the Nith and the Lochar Water, the fort would command a view of the whole of the Solway and of the western end of Hadrian's Wall. In the choice of

¹ Pennant, *A Tour in Scotland and Voyage to the Hebrides*, 1772 (1774), p. 95.

² *Stat. Account*, vi (1793), p. 31, footnote, whence Chalmers, *Caledonia*, i, pp. 88-9, 105, note (g), cf. Camden, *Britannia*, ed. Gough (1806), iv, p. 63, Christison, *Early Fortifications in Scotland* (1898), p. 70, Table G; *Inventory of the Royal Comm. on Ancient and Hist. Mons., County of Dumfries*, p. 25, No. 38, *Antiquity*, xiii, 1939, p. 284, Pl. iv. A, Ordnance Survey 25-inch sheets, D lxi, 5. (The fort lies in fields 398-9, 402-3.)

site advantage has been taken of the level crest, though the ground slopes away considerably towards the south-east angle.

A section¹ dug through the south side, near the wall at the west edge of field 402, disclosed a ditch 13 feet wide and 7 feet deep. The inner slope was normal. So, apparently, was the counterscarp for the first 3 feet downwards, after which it dropped vertically for 2 feet before resuming its slope to a slightly rounded bottom about 3 feet broad (Plate XXXVIII). The unusual profile is probably to be explained by the recalcitrant nature of the hard sandstone out of which the ditch is hewn, though the two feet of vertical face might be regarded as a partial use of the 'Punic' profile intended to steepen the counterscarp—a view which received some support from partial ditch-sections elsewhere in which the counterscarp dropped almost vertically from the lip; it is possible, indeed, that such was the original profile of the upper part of the ditch disclosed in the main section and that the present slope is due to the effects of weathering. Beyond a berm of 4 feet the base of the rampart, 15 feet wide, composed of soil and lumps of rock from the ditch, remained to a height of 15 inches. The back of the rampart rose at an angle of 45 degrees from the edge of a small trench, or gutter, cut 9 inches deep in the hard subsoil. No foundations were encountered in this section, but a small drainage-ditch lay 25 feet behind the rampart and occasional patches of dark earth discoloured with charcoal marked an occupation-layer.

A few trenches quickly established the position of the other three sides, at the same time revealing minor variations of structure and dimensions such as commonly present themselves in sectional work: on the north, in field 403, the rampart-width was $19\frac{1}{2}$ feet, and here one or two turves formed a kerb at the front edge, on the east the ditch was $14\frac{1}{2}$ feet wide. These trenches confirmed the lines laid down in the Ordnance Survey (Fig. 10), and showed the dimensions of the fort to be 655 feet from east to west by 510 feet (over the rampart centres). A gate was located about the mid-point of the east side, where the ditch was intermitted for some 30 feet and a heavily cobbled road led through the rampart; a long trench outside the gateway proved that there had been no *tubulus*. The state of the rampart does not permit of the location

¹ For permission to dig acknowledgment is due to Her Grace the Dowager Duchess of Norfolk and to Mr. Jamieson, tenant.

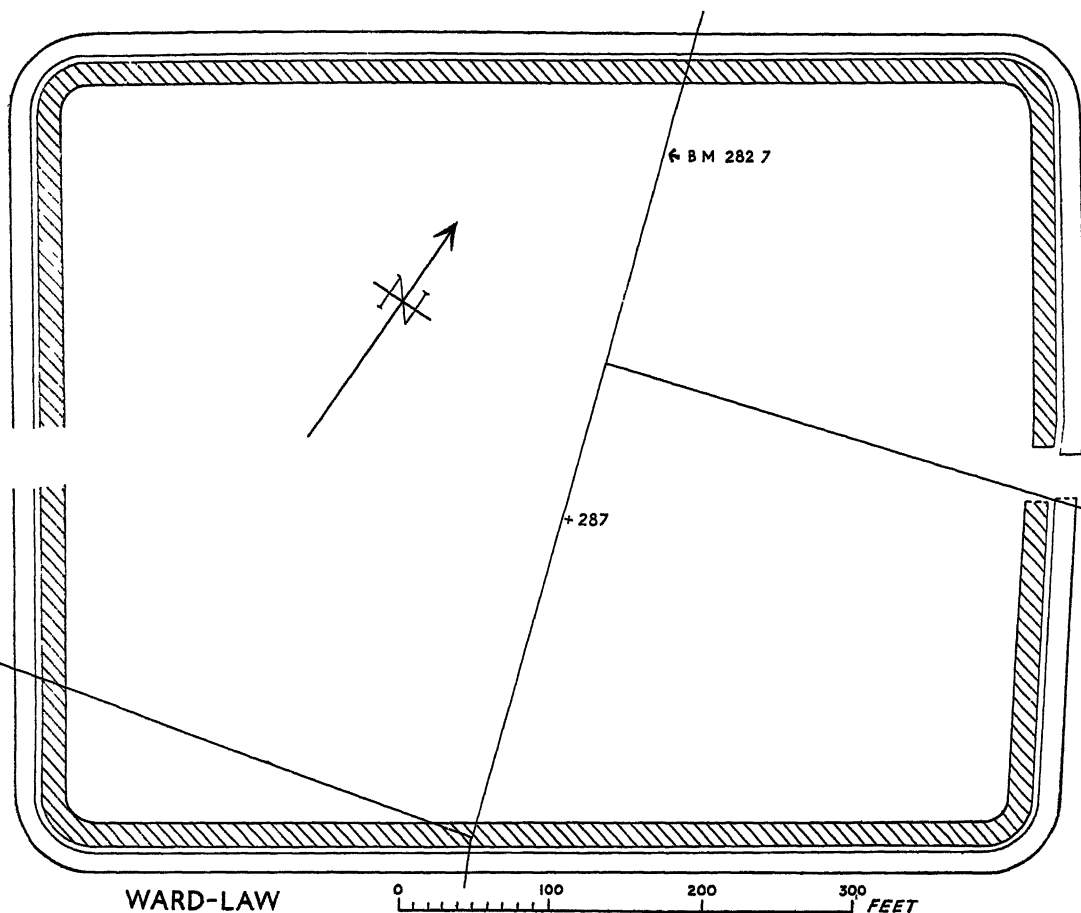


FIG. 10

of the other gates by surface inspection, but a west gate at least may be assumed in a corresponding position. No small finds occurred in the excavations, nor were any foundations encountered in two trenches in the east half of the interior. Here, however, only 12 inches of tilth cover the natural subsoil; possibly occupation-layers remain undisturbed by tillage in the more level ground to the west.

The plan of the enclosure is the standard rectangle with rounded corners adopted by the Roman engineers wherever possible, while the rock-hewn ditch, the substantial rampart, and the spread of heavy cobbling at the east gate show that the work was designed for permanent occupation. Its large area, about $7\frac{1}{2}$ acres, testifies to its importance. To Hadrian's Wall it would serve as an invaluable outpost, occupying a site which commanded a view of the entire Solway and its northern shore, and from which signals could be sent to the watch-towers on the opposite side. It may have seen much traffic passing the Firth by some sheltered harbour near Old Caerlaverock; and it controlled the entrance to Nithsdale.

GALLOBERRY

In 1939 the fort at Carzield, about $3\frac{1}{2}$ miles north of Dumfries, was examined by Mr. I. A. Richmond and Mr. E. B. Birley. Two ditches and a turf rampart composed the defences of a $4\frac{1}{2}$ -acre fort (interior measurement) equipped with stone barracks and wooden stables for the accommodation of a cavalry regiment. The exploration, which covered a comparatively small proportion of the total area, yielded evidence of Antonine occupation only, nor was there any clear indication of a break in that occupation.¹

In the hot weather of June of that year the grass on the sandy hummocks of the Nith valley soon burned brown, except where there was a retention of moisture owing to greater depth of soil. Thus, filled-in ditches, pits, and post-holes, as well as natural hollows, were visible from the air by the differential colouring of the grass. Not only did the two ditches of the Carzield fort show up clearly but another Roman site was discovered in this way at Galloberry, two-thirds of a mile further north.

The site is behind the farm-buildings of West Galloberry on a level meadow (D. xli, 14, 906) lying above the reach of possible river-floods. The field has often been ploughed and no earthworks can be traced on the surface, but an air-photograph (Plate XLI) revealed the ditch-plan of a temporary Roman camp, $1\frac{1}{2}$ acres in area, with a single gateway,

¹ It is to be noted, however, that two levels of *intervallum*-road were observed. For the excavations see *Dumfriesshire and Galloway Trans.*, 3rd Series, xxii (1942), pp. 156-63.

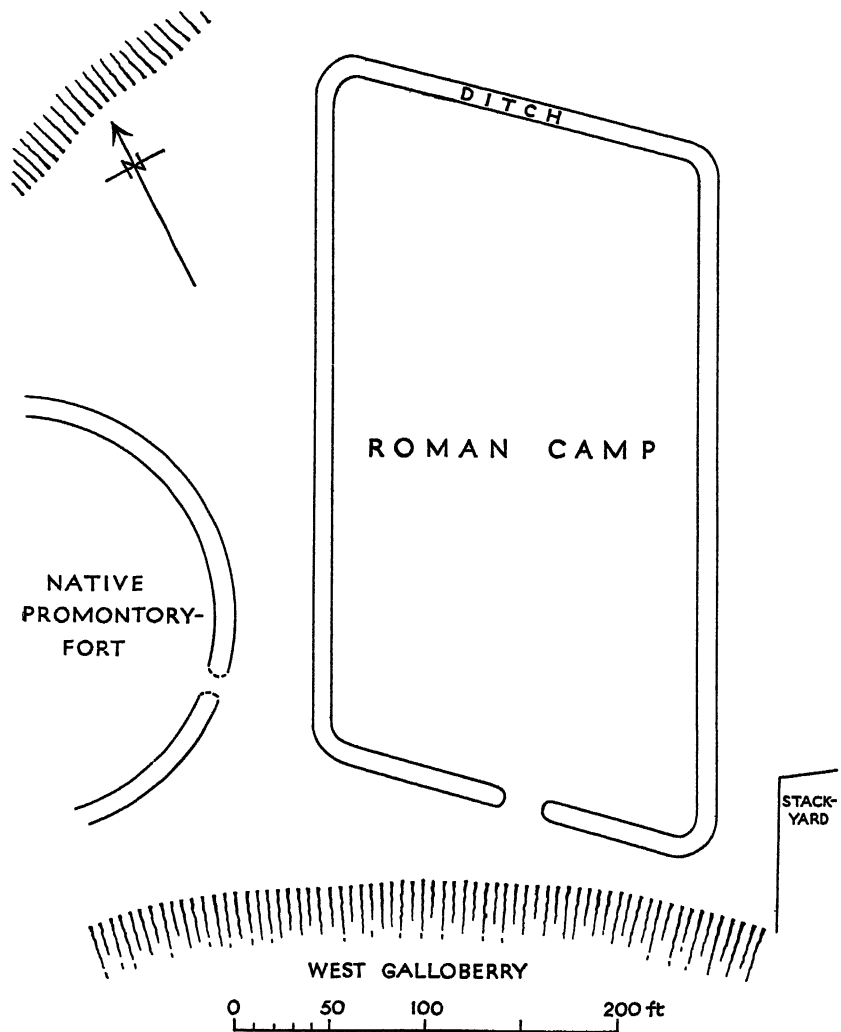


FIG. 11. PLAN OF ROMAN CAMP AND NATIVE FORT, WEST GALLOBERRY

20 feet wide, in the centre of the south side. The plan is in the form of a parallelogram, though the reason for the adoption of this shape when there is ample room on the plateau for the normal rectangle is not evident. A few trenches¹ quickly established the positions of the four sides (Fig. 11); the approximate length of the north and south sides was 210 feet, that of the east and west sides was 360 feet. The V-shaped ditch, 11 feet wide and $4\frac{1}{2}$ feet deep, had been dug in loose gravel. This was an unsuitable material for rampart construction, and the difficulty had been overcome by building in turf, for, although no remains of this occurred in position, some trenches disclosed a mass of turf-work tumbled into the ditch which undoubtedly represented rampart material (A, Fig. 12.).

WEST GALLOBERRY

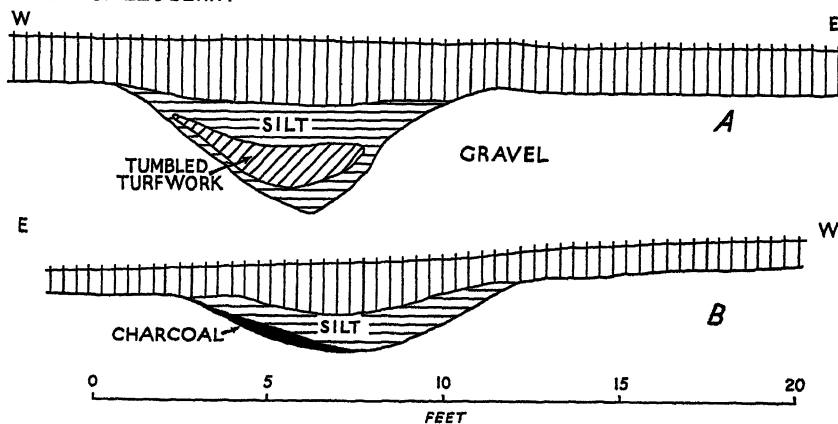
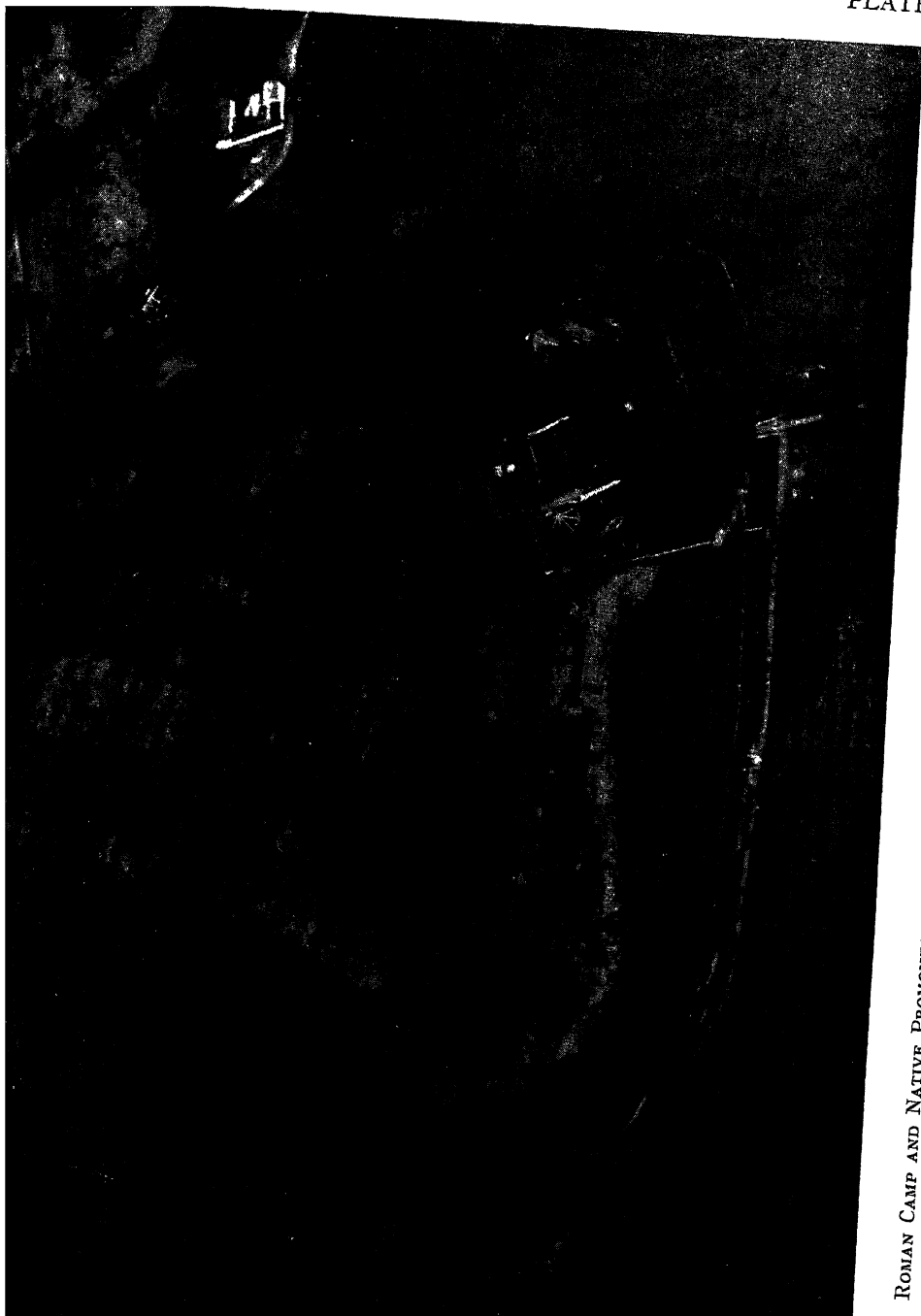


FIG. 12. DITCH-SECTIONS OF EARTHWORKS AT WEST GALLOBERRY

The shallow ditch which curves across the west corner of the field (Plate XLI) is very different in character (B, Fig. 12) and perhaps formed the defence round a native settlement on the promontory there. Further evidence of native habitation may be provided by the palisade-trench, 37 feet in diameter, and ring of post-holes which cause the faint circle in the air-photograph beyond the east angle of the Roman camp (Plate XLI).

¹ Permission to dig was kindly given by Mr and Mrs. Kirkpartick. The cost was generously defrayed by Dr. Semple of Dumfries.



ROMAN CAMP AND NATIVE PROMONTARY-FORT, REVEALED BY PARCHING OF VEGETATION, WEST GALLOBERRY, NITHSDALE
Photo C G M Alington

BARBURGH MILL

In July 1945 air-observation revealed here, as a crop-marking in field D. xl, NE., 1066 (second edition), then in oats, the outline of a square enclosure with rounded angles, in the middle of the valley, at the upper end of the Auldgirth gap, commanding good views north and south. No traces of the enclosure are visible on the surface, but excavation in July 1946 confirmed air-observation as to the shape of the work, and showed the ditch to be V-shaped and to be $4\frac{1}{2}$ -6 feet deep and 12 feet wide. There had been a single gateway, indicated by a gap of about 17 feet in the ditch in the middle of the north-east side. Within the ditch the measurements are 120 by 124 feet. Of the rampart nothing remained but some traces of cobbling which had formed its base: from this it appeared to have been about 20 feet broad. That would make the interior area about one-sixth of an acre. Two trenches taken across the interior to the right of the entrance showed patches of charcoal, but encountered no traces of buildings and unearthed no objects. The dimensions, shape and structural details, however, combined with the suitability of the site, leave no doubt that the work was a Roman fortlet of the same type as those at Milton and Durisdeer.

DURISDEER

BY JOHN CLARKE

On the surface the remains of the small earthwork on the Kirk Burn, a mile above Durisdeer church, presented strong similarities to those at Milton (Tassiesholm), and it seemed probable that excavation,¹ if it proved the work to be Roman,² would be a useful check upon the results obtained there. At the same time it was hoped that this might be a first step towards settling the long disputed question of a Roman route up Nithsdale. The Kirk Burn site lies in a narrow valley down which it had long been supposed³ that a Roman road ran connecting the Clyde valley near Crawford with the valley of the Nith. If the existence of such a cross-road were confirmed by evidence proving the earthwork to be Roman, a road up Nithsdale could be assumed with some confidence.

In its general surroundings the site is very different from that at Milton. The earthwork stands out boldly, its rampart and ditch still most striking, at the very end of a rocky spur projecting from the hills down the valley of the Kirk Burn. On all sides the ground falls away steeply except towards the north-east, in which direction the earthwork faces along the rising crest of the spur. The view is shut in by high hills except to the rear, where one looks across the Nith valley to the Galloway hills beyond. The great native fort at Tynron Dun,⁴ which by the

¹ With the consent of H M Office of Works and of Mr Dalton, estate agent for His Grace the Duke of Buccleuch, work was conducted on the site for twelve days in August 1938

² It is not identified as Roman in the *Inventory of the Royal Commission on Ancient Monuments, County of Dumfries*, p. 67, No. 163; cf. p. 11. Previously its Roman origin had been taken for granted. There is a plan of it (Mr St. Joseph informs me) in Roy's MS map of about 1750, sheet 5/5, see also *Milt Anti*, p. 105 (where by a slip it is referred to as 'Tibber's Castle'). Cf Pennant, *A Tour of Scotland etc.*, 1772 (1774), p. 112, *New Stat Account*, iv (1835), p. 327 (Durisdeer Parish).

³ See above, p. 44.

⁴ *Inventory of the Royal Commission on Ancient Monuments, County of Dumfries*, p. 111, and p. 207, No. 609.

evidence of its rock-hewn ditches is roughly contemporary with the Roman period, can be clearly seen some seven miles away across the valley.

The Romans seem to have found the site sharply hog-backed and to have done a good deal of levelling to secure even the small space they needed. Rocky debris of this process, supplemented no doubt by upcast from the ditch, which is cut at some points through living rock, forms the bulk of the rampart material, and is spread to a depth of nearly 2 feet behind the rampart to level up the ground there. The rampart was found to be about 30 feet thick over the base (Plate XLII). Its inner margin was not clearly defined but could be judged by the abrupt beginning of signs of occupation, especially fires. Its outer margin was stepped into the rock¹ to ensure stability on the steep slope. There was practically no berm. The ditch varied from 11 to 14 feet in width, being wider where cutting was easier, though the difference may be accounted for by the weathering of the ditch-slope where not cut in rock. It stopped in front of the single gate, which was on the north-east side. Here there was a short outer ditch, or *tutulus*, laid out a little to one side of the entrance.

The stopping of the *tutulus* before it covered the whole width of the entrance looks as if room was being allowed for a road to pass out from the gateway to the north-west side, as if the main road had run, or been expected to run, along that side. However that may be, there was evidence to indicate that, at one time at all events, the main road had run along the south-east side. At that end, it was found, the *tutulus* had been filled in, as if to ease the course of a road from the gateway bending sharply to the right. To judge by the absence of any accumulation of silt under the filling in the *tutulus*, this had been done not very long after it was dug. That would imply that, throughout the greater part of the occupation at least, the main road had made use, as a modern farm-track does, of a convenient shelf running outside the south-east rampart and ditch. On that shelf a spread of gravel was found overlying the rock.

The enclosure was distinctly smaller than that at Milton, measuring 105 feet by 60 feet within the rampart, which gives the interior an area of only one-seventh of an acre. In its internal arrangement, however,

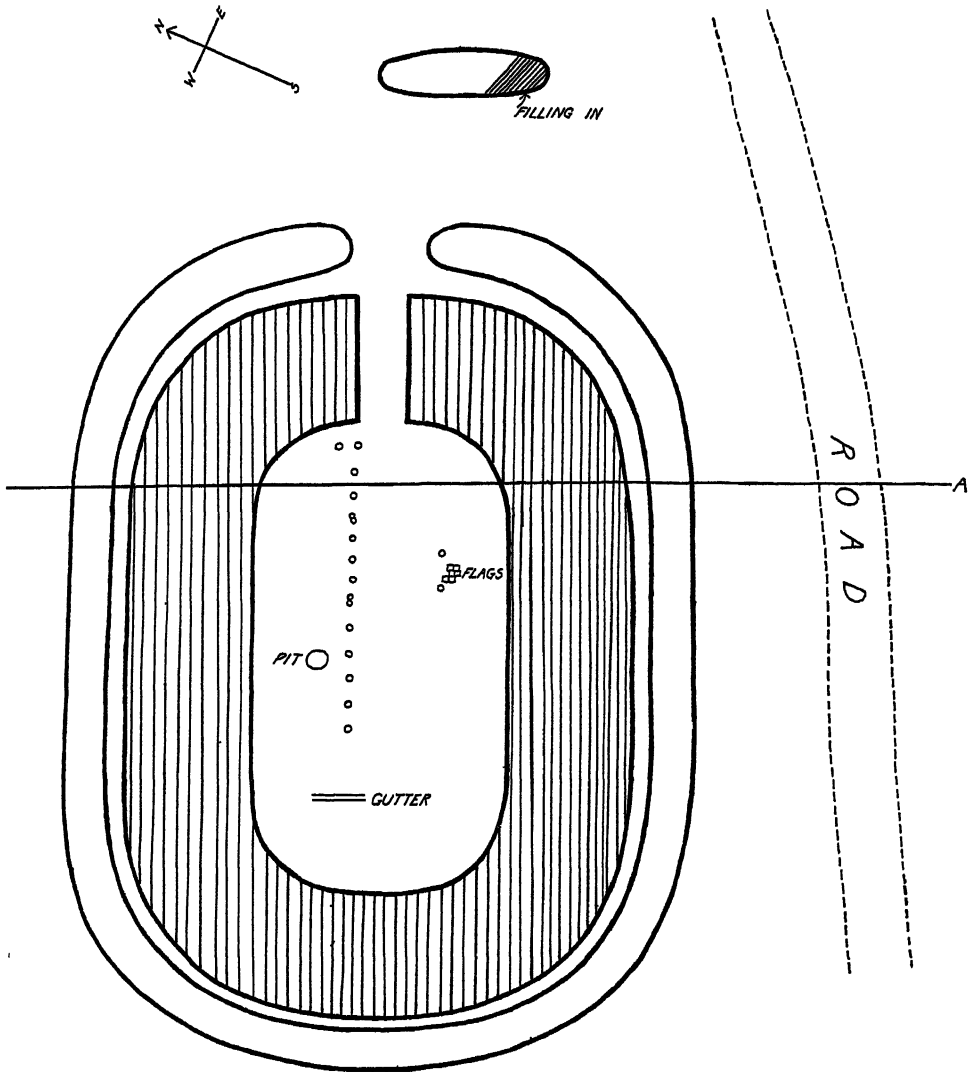
¹ The evidence was obtained from the south-east rampart, at the outer edge of which a shelf 3 feet wide had been cut in the rock.

it closely resembled Milton. On the south-east side flagging was found at some points but no definite trace of structure. Nor were any post-holes found along the south-west side, though here there were remains of a rough gutter about 17 feet inside the rampart and parallel with it. Alongside the gutter a horseshoe was picked up ; together they suggest the possibility that, occasionally at least, ponies may have been tethered inside the rampart on this side. As at Milton, there was evidence of post-holes for huts down the side of the interior to the right of the entrance, here the north-west side. Between the post-holes and the rampart there was a circular pit cut 5 feet deep into the rock.¹

If the overlapping of some of the post-holes, along with differences of size and irregularity of spacing, can be taken as evidence of two periods, with rebuilding at the beginning of the second, the history of the site as reflected in the remains would agree with that of the small enclosure at Milton. Here as there the occupation was wholly Antonine. The finds on which this dating is based consisted mainly of rough pottery ; most of the fragments were of cooking-pots, with an admixture of the common black dish diamond-scored on the side. One coin was recovered—a much corroded 'second brass' of Vespasian.

The evidence here combines with that of Milton to support the view already put forward that such small posts were primarily units in a system of road-police. That the roads included, in the Antonine period at all events, a road up the valley of the Nith at least as far as its junction with the Carron Water seems to be implied by the position of the earthwork on the Kirk Burn, well down the western side of the watershed between Clydesdale and Nithsdale.

¹ It was cleared out with much hope but no reward, it was full of black rather slimy material. For pits in use inside occupied buildings cf. *Old Kilpatrick*, p. 20. At Newstead pit xiii, dug in the floor of one of the rooms of a building (block xiii) which was occupied throughout the Antonine period, contained Antonine pottery (*Newstead*, pp. 119, 199).



SCALE OF 0 10 20 30 40 50 60 70 80 90 100 FEET

PLAN ON ROMAN FORTLET NEAR DURISDEER

CASTLEDYKES (CORBIEHALL)

BY ANNE S. ROBERTSON

The existence of Roman remains in and around Carstairs and Lanark has long been recognised. Sir Robert Sibbald, writing at the beginning of the eighteenth century, tells us that 'the People have a Tradition that another Roman Street went from Lanrick to the Roman Colony near Falkirk,' and that 'Carnwath, to which a Roman way went from Guidi [*i.e.* Camelon] seemeth to have been a Colony.'¹ He also quotes a MS. note by Robert Gordon of Straloch which refers to 'Colania, ubi nunc Lanrik.'²

John Horsley was the first to record the existence of a Roman fort at Carstairs, his description of which clearly refers to the site now known as Castledykes. In discussing the position of the Colania of Ptolemy, he says :—

Ptolemy seems rather to direct us towards Lanerk, . . . and there is a large square incampment at Carstairs near Lanerk, where the ruins of the buildings are to be seen and urns and coins have been found. It is a very large fort, and the ruins very considerable, and a grand military way passes close to it ³

Maitland gives a good description of the fort as it appeared in his day :—

The main branch of the military way from Biggar crosseth at a ford in the Maidwin-burn, about three miles north-west from Biggar and passing the villages of Lampert, Renstruther, and the avenue leading to Lockhart-house, runs through the station denominated the Castledikes, which is an exact square of about two hundred yards, fortified with double ramparts and ditches, but the outward rampart, and a great part of the inner, being demolished, both ditches are thereby almost levelled, and the surface of the station being then covered with corn, I could neither discover the site of the praetorium, nor other remains therein, though 'tis said that divers coins, and other antiquities have been found at this place; but I could not learn in whose custody these

¹ *Historical Inquiries* (1707), pp 39, 42

² *Introductio ad Historiam Rerum a Romanis Gestarum* (1706), p 7.

³ *Br. Rom* (1732), p 367.

were However, the praetorian, decumana, dextera, and sinistra gates of the fortress are plainly to be seen ¹

The first published plan of the fort of Castledykes appeared, along with that of the neighbouring camp at Cleghorn, in Roy's *Military Antiquities*, from which the following passages may be quoted as those which most directly concern the fort :—

From this place [Biggar] it is probable that the Roman way (if actually finished here) went by Liberton Kirk, towards Lockhart-hall, now called Carstairs-house Near the kirk of Carstairs some remains of a bath, and other antiquities, have been found The road having passed through the inclosures at Lockhart-hall, then enters the station called Castle-dykes, beautifully situated on the bank above the Clyde, and leaving Renstruther on the right, proceeds to Cleghorn-mill, where it has passed the river Mouss Thence it has led through the inclosures of Cleghorn, leaving Agricola's camp on the right

We have had occasion to remark another [Roman road], which hitherto seems to have been wholly unnoticed by antiquaries It was probably intended to lead from Lanark, or perhaps the station at Castle-dykes, near Carstairs, by the gorge of Loudon-hill into Airshire . . .²

It was in 1753 that Roy visited Castledykes, and his reference to the remains of a bath near Carstairs gave the first hint that there may have been a Roman fort at Carstairs as well as at Castledykes. The supposed remains of such a fort were described in some detail by Bishop Pococke, writing in 1760. The fort at Castledykes he dismissed in a single sentence :—

I rid from Lanark four measured miles to Carstairs a large village To the east of the village near the Church, are remains of the ancient town supposable Colonia. It is near a rivulet which is to the east of it, and was about a hundred yards broad from east to west and two hundred long, the Parsonage House being near the North Wall There is a large head extending from the North Wall extending to the East [sic] so as to keep up the water of the rivulet for the use of the town They have found pieces of iron, one like a pickaxe another like a broad knife and some little thin pieces of lead, a stone trough, a stone like a console with two ornaments in front like a small pillar and base crowned with flower de lis, and another which appeared like a gothic ornament of a head, but they said it was taken out of the old town, and as the cap was remarkable a drawing [not preserved] was taken of it About a mile

¹ *Hist. of Scot.* (1757), p. 194. This seems to be the earliest application of the name Castledykes to the fort.

² *Milit. Ant.* (1793), pp. 104, 106; see also p. 122 and Pls. ix and xxvii. Roy was the first author to identify the camp at Cleghorn.

nearer Lanerk, at a village, I saw signs of what I took to be large irregular entrenchments¹

That the remains which Bishop Pococke saw at Carstairs were Roman seems improbable from his own description of them, and the existence of a fort there must be regarded as extremely doubtful.

The *Statistical Account of Scotland* followed Roy in the main but supplied a few additional details, including a reference to a little post on Lanark moor, whose position is now uncertain.² Later writers did little more than repeat the information given by their predecessors.³

Many objects of Roman date have been recorded as found from time to time in the neighbourhood of Castledykes.⁴ Among them were isolated finds of coins which were said to be of Germanicus, Nero, Trajan, Hadrian, Marcus Aurelius, and Faustina, and a hoard of bronze coins of Germanicus, Trajan, Hadrian and Faustina.⁵

This list established beyond doubt the occupation of Castledykes in the second century, and, if the attribution to Germanicus was correct, it suggested the possibility of an occupation in the first century. Still more suggestive were the finds from a crannog at Hyndford, near Lanark, which was excavated in 1898.⁶ These included many objects of Roman origin, among them forty fragments of Samian ware, which, with one doubtful exception, were of Flavian date. This could fairly be taken to imply that the area was in Roman occupation during the Flavian period.

¹ From a letter dated 'May 22d, 1760' (*Scottish History Society Publications*, 1, 1887, p. 45)

² *Stat. Account*, xv (1795), p. 10; xviii (1796), p. 180

³ Chalmers, *Caledonia* (1807), pp. 122, 135, 138, 155, *New Stat. Account*, vi (1845), pp. 13, 553, 554; Stuart, *Caled. Rom.* (1845), pp. 140, 141, 238, 260.

⁴ Gough's *Camden* (1806), iv, p. 82, Horsley, *op. cit.*, p. 367; *Stat. Account*, xv, p. 10, and xviii, p. 180, Chalmers, *op. cit.*, pp. 135, 155, *New Stat. Account*, vi, p. 554, Stuart, *op. cit.*, p. 141 (the 'Roman camp kettle' mentioned there is not Roman).

⁵ The coin finds have been fully discussed by Sir George Macdonald in *Proc. Soc. Ant. Scot.*, li (1917-18), pp. 219 ff. and 272 f.

⁶ *Proc. Soc. Ant. Scot.*, xxxiii (1898-9), pp. 373 ff., and lxvi (1931-2), pp. 381 ff.

At Castledykes itself, a trial hole dug in 1916 produced Roman pottery,¹ but no systematic excavation took place previous to 1937.²

THE SITE

The fort lies three miles east of Lanark and one mile south of Carstairs. It occupies a typical site for a Roman fort—a plateau with a dry sandy or gravel subsoil, overlooking the river Clyde on the south. The slope to the north and south is gradual but sweeping, and the view wide and commanding. To the north-west one looks towards the camp at Cleghorn, to the north-east in the direction of the post at Castle Greg, to the south-east up the Clyde valley, and to the south-west up Douglas Water. The ground to the east and west is rather flat, and the outlook now obstructed by trees, but in Roman times there would no doubt be a clear view along the roads which ran from the east and west gates. The line of the road from the latter is preserved for some distance westward by a modern tree-lined avenue (Plate XLIII,A).

Since Roy's visit to the site in 1753, the outlines of the fort have been considerably obscured by the planting of a belt of trees across the centre and by the cultivation of the northern and southern extremities. The ramparts, however, can still be traced above ground, that on the east side being best preserved (Plate XLIII,B). The ditches are no longer visible.

Digging was confined to the plantation,³ and to the field on the north of it, that on the south being under cultivation. In its final form, the fort was found to have had its axis slightly east of north (Plate LVI). Inside the ramparts it measured 516 feet from east to west and approximately 570 feet from north to south, this giving an internal area of about

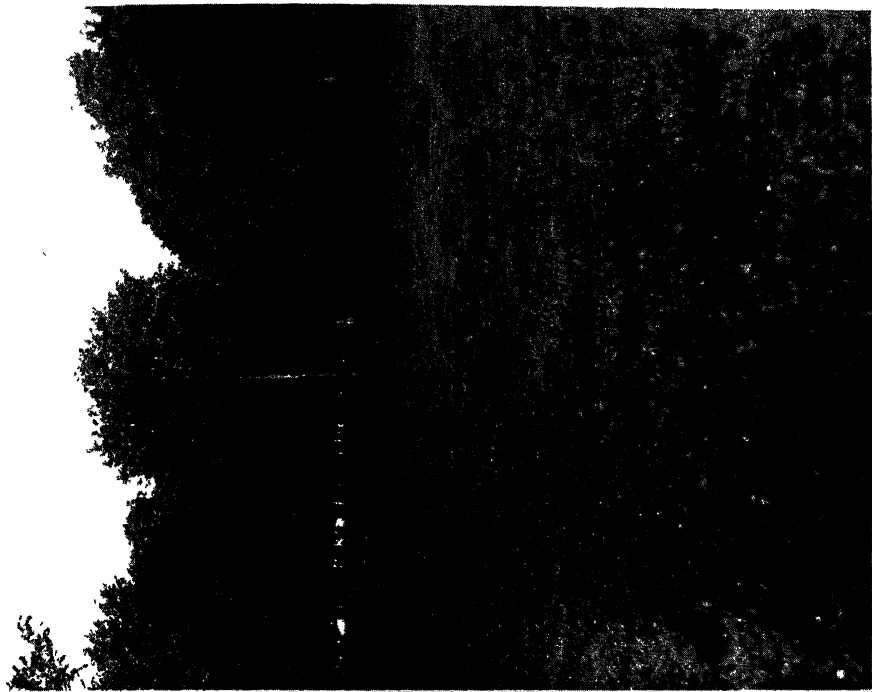
¹ *Proc. Soc. Ant. Scot.*, LI (1917-18), p. 219.

² Permission to excavate was secured from H M Office of Works, the site having been scheduled as an Ancient Monument, and from the owner of the ground, Mr. Daniel Stewart of Corbiehall Farm. Digging was carried on for six weeks in July and August 1937, and for a further four weeks in March and April, 1939. The work was at first supervised by Mr. John Clarke and myself, but Mr. Clarke was later compelled by pressure of other work to resign his share in it. He continued, however, to render valuable assistance in an advisory capacity.

³ Some of the trees are two hundred years old, and the spreading roots greatly hindered the work.



A TREE-LINED AVENUE ON LINE OF ROMAN ROAD FROM WEST
GATEWAY OF CASTLEDYKES FORT



B. THE EAST RAMPART OF THE FORT

6½ acres. It is therefore the largest of the known forts in south-western Scotland, with the exception of that at Wardlaw, Caerlaverock.¹

THE EASTERN DEFENCES

Sections cut on the east side revealed two main ditches, each about 20 feet wide, the outer one 4 feet deep, and the inner 7 feet deep.² They were roughly V-shaped. To the inside of these two ditches there was a narrow ditch, 7 feet wide by 2 feet deep, the inner edge of which lay under the front of the rampart.³

At the bottom of the narrow ditch there was a considerable deposit of greyish-black silt, over a foot in depth, capped by a layer of decayed vegetation. On top of this had been laid an artificial spread of sand or sandy brown earth, the purpose of which was obviously to provide a level berm between the rampart and the inner main ditch. The narrow ditch (which may be described for convenience as the berm ditch) must therefore belong to an earlier system than the rampart in its final form. No datable pottery was covered from any of the sections cut through the berm ditch, the only find from it being a fragment of bottle-glass. The depth of silt and the vegetation, however, looked like the accumulation of a considerable number of years.⁴

The east rampart was 30 feet wide at the base. The front 5 feet stood on a stone foundation,⁵ which consisted of large flat stones at the outer edge, and of smaller cobbles behind.⁶ The rear 25 feet lay on the natural sand. At some points the soil had been cleared from the sand before the rampart was built, at others it had not.⁷ Above the stone

¹ See above, p 120

² See Section through East Ditches (Trench 1, Pl L) The width and depth of all ditches were measured from the top of the subsoil. The Roman surface must have been a little higher

³ See Section through East Rampart (Trench 1, Pl XLIV), and Section through East Berm Ditch (Trench 2, Pl XLV).

⁴ Several samples of the silt were examined by Mr W R Flett, of the Department of Geology in the University of Glasgow, and were found to contain many rootlets and much decayed vegetable matter. Mr Flett agreed that these must have taken some considerable time to accumulate, but precisely how long he was unable to say

⁵ Except in one Section (Trench 1, Pl XLIV). See below, p 132.

⁶ See Section through East Berm Ditch (Trench 2, Pl XLV).

⁷ See Section through East Rampart (Trench 1, Pl XLIV).

base the superstructure was of sods, carefully laid, while for the next 7 feet or so it was made up of earth and less well stratified sods, many of them peaty. These keyed into the turf cheek in front in such a way as to leave no doubt that they were of contemporary build. The front 12 feet of rampart was therefore all later than the berm ditch over which the stone base projected.

The remaining 18 feet or so of the rampart was of much more heterogeneous composition, the bulk of it consisting of un laminated turf, with streaks of clay, peat, sand and gravel. Much of this material, especially the un laminated turf, presented the appearance of having been reused. It may possibly represent the remains of an earlier rampart which may be associated with the berm ditch. However that may be, the manner in which the rear portion seemed to lean forward on the front suggested that the 30-foot rampart had been erected by setting up a carefully constructed 12-foot front and then laying mixed, possibly reused, material behind it to a breadth of 18 feet.

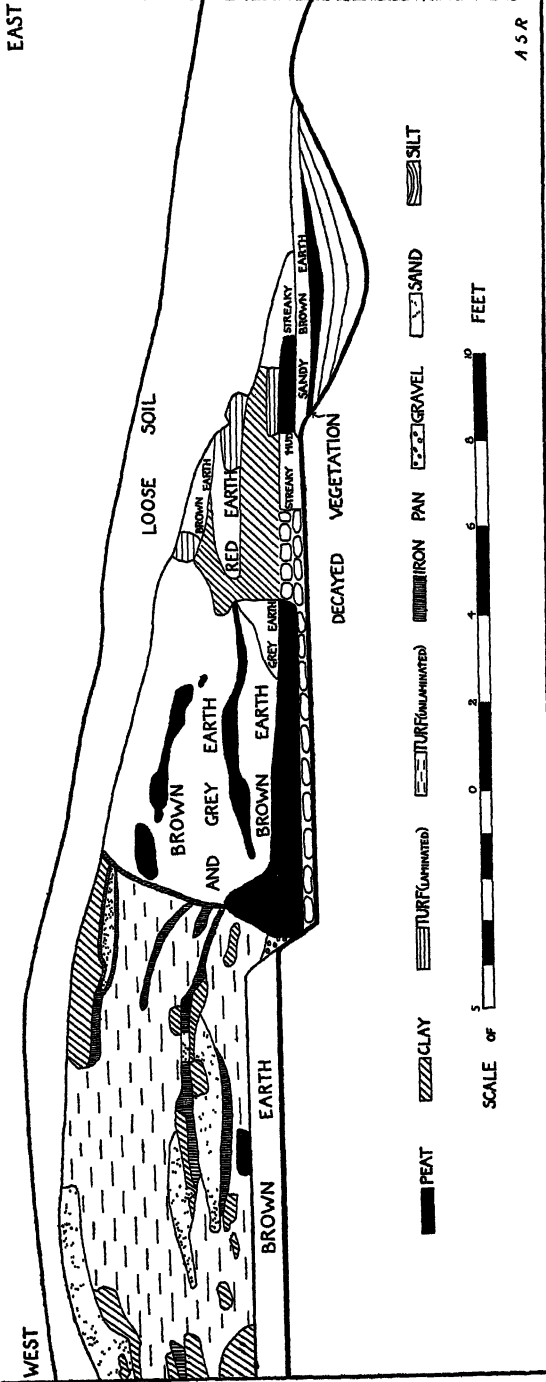
In one section,¹ the front of the rampart was found to be of a different character from that described. The outermost 4 feet lay partly on the sandy brown earth filling the berm ditch, and partly on the natural sand behind. The next $9\frac{1}{2}$ feet stood on a base of cobbles, of which there was a double layer at the outer edge. To provide a level floor for this base, the top soil had been removed, and the natural sand stepped down at the inner margin of the base to a depth of about a foot.

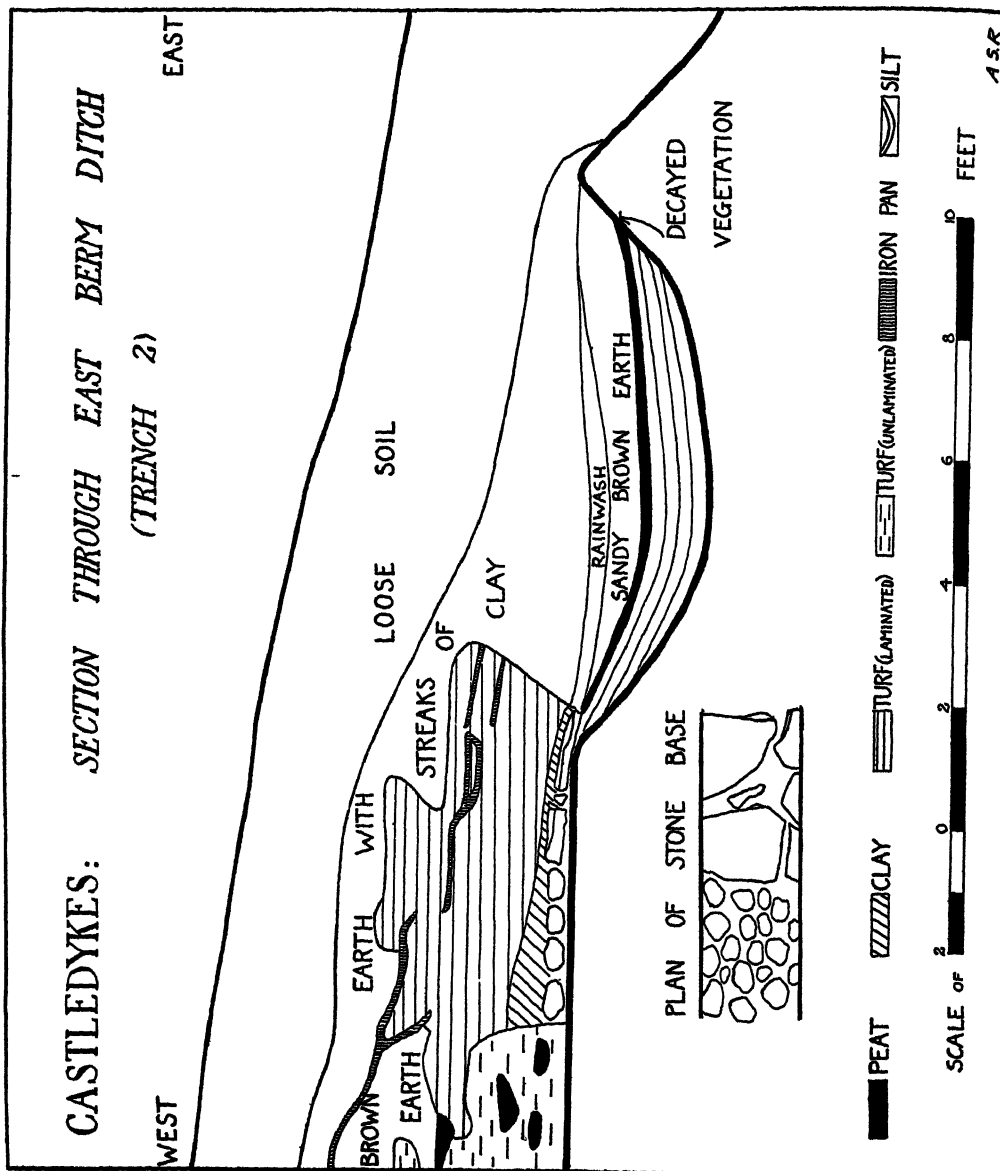
Over, and in front of, the double layer of cobbles, the superstructure was mainly of clay and earth; over the rest of the cobble base it was of peat and earth. It was all, however, so keyed together as to be clearly of contemporary build. Moreover, in this as in other sections, the rear portion of the rampart appeared to have been built up against the front, so that the difference in material and foundation of the latter at this point did not seem to have been due to a refacing. No satisfactory reason for this difference suggested itself.

In the same section a piece of a box flue-tile and three amphorae fragments were discovered in the upper layer of cobbles at the outer edge of the rampart base. Not only did these finds help to establish the

¹ See Section through East Rampart (Trench 1, Pl. XLIV). Trees made it impossible to continue the trench right through the rampart.

CASTLEDYKES: SECTION THROUGH EAST RAMPART (TRENCH 1)





secondary nature of the 30-foot rampart, but the flue-tile suggested that the previous occupation had included at least one stone building.

The back of the rampart was not marked by a stone kerb, but for a distance of about 40 feet southwards from Trench 1 (Plate LVI), it was found to rise vertically for at least 4 feet of its height, and also to have its profile so sharply defined as to suggest that here, at least, it had been retained in some fashion. At one point, indeed, a post-hole was found immediately behind the rampart. It was not quite a foot in diameter, and was filled with dark earth and scraps of charred wood. A search for more post-holes in a corresponding position was rendered fruitless by tree-roots. It seemed likely, however, that the back of the rampart had at one time been revetted with wooden boarding. It may even have supported a lean-to wooden shed. Later, the back of the rampart and the ground immediately behind it were covered over with rampart-slip, the result of damage or of evacuation.

Pottery sealed up by the slip was abundant, and all of Antonine date. The 30-foot rampart must therefore have been built in the Antonine period. Moreover, the tail of the slip was covered by the outer edge of a secondary *intervallum*-street which was laid on made-up soil. In this make-up, and also immediately above the street, a few Antonine potsherds were found. Two occupations of the fort in the Antonine period were thus established. In the first of these, the 30-foot rampart was built; in the second, after this rampart had been damaged or neglected, a reconstruction was carried out, involving re-levelling and the laying down of a new *intervallum*-street. This secondary street was about 22 feet wide, and well cobbled. It ran at a distance of 8 feet from the back of the rampart.

Evidence of a pre-Antonine occupation was also forthcoming. Unstratified pottery found behind the rampart included a piece of a Samian platter (form 15/17) of Flavian date,¹ and five fragments of a hard grey olla or beaker, also of Flavian date.² These at once established an occupation of the site in the Flavian period. The possibility now suggested itself that the berm ditch, which had been filled in when the 30-foot rampart was constructed, had been in use during the Flavian occupation.

¹ See below, p. 161

² See below, p. 163.

Thirty feet or so south of Trench 1 (Plate LVI), there was found behind the rampart a mass of burned clay, wood and stones, fused glass and lead-slag, along with many potsherds of Antonine date. These remains lay partly under the secondary *intervallum*-street and so dated from the first Antonine occupation. They appeared to be the ruins of a clay and wood structure lying immediately behind the rampart and probably built up against it.¹ The signs of burning suggested that the structure had either been used for some such purpose as cooking² or smelting—possibly lead-smelting³—or else had finally been burned down. It had certainly been disused in the second Antonine occupation, its debris being then levelled out and partly covered by the secondary street.

At the one point on the east side at which the area within the ramparts was further penetrated, a patch of cobbling was encountered at a distance of 4 feet behind the secondary *intervallum*-street. It was 7 feet wide, and defined on each side by kerb-stones. Its connections could not be traced, but it must have been contemporary with the street, since both were at the same level and both were laid on made-up soil containing Antonine pottery.

THE EAST ENTRANCE

A systematic search for structural remains of the east gateway was prevented by a thick growth of trees, but its approximate position was ascertained by following the two main ditches until they stopped, and by tracing the road which entered from the east. The trees defeated all attempts to discover whether the berm ditch had been intermitted, so that it had to be left uncertain whether the system represented by that ditch had included a gateway at this point.

As the road lay just under the modern surface, it had been much disturbed and in places rooted out altogether. At points where examination was possible, however, it was found to be 18½–20 feet wide, with a hard gravel surface over a cobble bottoming. It was flanked by

¹ It will be remembered that in the first Antonine occupation the rear of the rampart appeared to have been retained in some fashion at this point

² Cookhouses were found in a similar position behind the east rampart at Slack (*Yorks. Arch. Journ.*, xxvi, 1920, pp. 34-36).

³ See below, p. 159.

gutters 2-3 feet wide. This road closely resembled the later of two successive roads noted outside the west gateway. There the later road, as will be seen, had been laid directly upon the earlier structure.¹ No such evidence was to be looked for at the east entrance, owing to the disturbed condition of the remains. Evidence for two successive road-plans did, however, survive in a different form.

North of the entrance, the two main east ditches had at first terminated independently. The position of the ditch-ends was then such as to indicate that a road had run straight out eastwards from the gateway. Later, however, the two ditches were combined into one, which was gradually narrowed by having an artificial counterscarp of clay and gravel patched on and beaten hard. The original end of the inner ditch now served as the end of the two combined, while the original end of the outer was filled with clean sand to allow the road, or a branch or loop from it, to be laid across it. No datable material was found under the filling to give a clue to the date at which the change in ditch-plan, and consequently in road-plan, had taken place. The part of the road laid across the ditch-end, however, resembled the later of two successive roads found outside the west gateway,² and there evidence was discovered which indicated that the later road had been laid down in the second Antonine occupation.

Unfortunately, it was not practicable to work out the road system further, or to follow up a ditch encountered outside the entrance running east and west. This ditch was 6 feet wide, and, apparently, only 1½ feet deep. From its position, it might have been a road-ditch, flanking a road running straight out eastwards from the entrance, but for such a ditch the width, though not without parallel,³ would be unusual. It seemed more likely that the ditch had enclosed an annexe occupying the level ground outside the northern half of the east side of the fort. If so, the point at which it was cut across must have been at, or near, its western end, and it is possible that it widened and deepened as it ran eastwards. If, on the other hand, its dimensions as noted outside the east entrance of

¹ See below, p. 143.

² Ibid

³ At Old Kilpatrick, for example, the ditches flanking the Military Way were from 5½ to 7 feet wide (Macdonald, *The Roman Wall in Scotland*, p. 185).

the fort can be taken as representative, it may be found to connect up with a similar ditch (EF, Plate LVI) discovered outside the eastern half of the north side of the fort.¹

That, in the Antonine period at least, the level ground outside the northern half of the east side was occupied by an annexe was suggested by the discovery, far out on the east side, of four fragments of Samian ware and one of a mortarium, all of Antonine date. If this area was so utilized, the diversion of the road from the east entrance, or, as seemed more probable, the addition of a branch or loop to it, must have been intended to give access to, or a passage through, the annexe. The presence of an annexe, however, must remain a matter of conjecture until the area outside the north half of the east side of the fort, from the east entrance to the fence at the north-east corner, has been further explored.

THE WESTERN DEFENCES²

Four main ditches were discovered on the west side, the two inmost being each 20 feet wide by 7 feet deep, the third 15 feet wide by 4 feet deep, and the fourth 16 feet wide by 3-4 feet deep³. The first and second ditches, besides being the deepest, were regularly V-shaped, with a square drainage-channel, 2 feet wide, at the bottom. They narrowed from 20 to 18 feet as they approached the north-west corner, but regained their usual width after rounding it. In the first ditch there was much rampart material, and in both first and second ditches the filling contained building-stones, glass and Antonine pottery. This was doubtless the result of post-Roman levelling.

The third ditch, on the other hand, had silted up naturally to a depth of 2 feet, and had then been deliberately filled in with clay, sand and gravel, and levelled over with a spread of red gravel. This gravel spread extended also over the platform between the third and fourth ditches. In the silt below the ditch-filling there were found a few large stones, some decayed wood, an ox-tooth, a few amphorae fragments, four

¹ See below, p. 157

² On the west side the subsoil varied from white or light-brown sand to red gravel, and this variation, combined with the obstruction caused by tree roots, added greatly to the difficulties of interpretation.

³ See Section through West Ditches (Trench 3, Pl. L).

pieces of Samian ware (forms 27, 29, and 37), all of Flavian date,¹ another of uncertain type, but of very hard clay with a glossy glaze,² and thirty-six fragments of coarse ware, all probably of Flavian date.³ The fact that the pottery included so many fragments that were probably or certainly of Flavian date, and none that was certainly of Antonine date, left no doubt that the third ditch had been dug in the Flavian period and filled in either later in that period or else at the beginning of the Antonine occupation. The depth of silt in the ditch supported the latter view, for it was more likely to have accumulated in the interval between a Flavian and an Antonine occupation than in a break in the Flavian occupation.

As it approached the north-west corner, the third ditch increased in width from 15 to 22 feet, and then narrowed to a curious hooked end 12 feet wide. This strange behaviour aroused the incredulity of all who visited the site, and does not seem to have a precise parallel elsewhere. The ditch-end, however, was almost entirely exposed and there was no doubt that it had had the shape shown on the Plan. Its purpose may possibly have been to break up the rather broad platform between ditches at this corner. At Ardoch, an attempt seems to have been made to break up a similar platform at the north-east corner of the fort.⁴

Within the curve of the hooked end, there was a shallow pit, 6 feet long by 3 feet wide. It contained four fragments of rustic ware,⁵ and seemed to have been dug for no other purpose than to receive them. These fragments were the first of their kind to be discovered at Castledykes. They amplified the pottery evidence already noted for an occupation of the site in the Flavian period.⁶ Moreover, the apparent connection of the pit in which they lay with the third ditch was in agreement with the Flavian origin established for that ditch.

The first, second and third ditches were finished off with blunt ends on the north side of the west entrance. The fourth ditch, on the other hand, appeared at first sight to have ended in two horns. A careful examination, however, showed that the outer of these had been filled in

¹ See below, pp. 160, 161.

² See below, p. 161.

³ See below, p. 164.

⁴ *Proc. Soc. Ant. Scot.*, xxxii (1897-98), p. 421.

⁵ See below, p. 163.

⁶ See above, cf. p. 133.

and levelled over with clay and red gravel. There were no finds from below the filling, but a few Antonine potsherds from the inner horn and from the main body of the ditch proved that they, at least, had been open in the Antonine period. It was clear that the outer horn represented the original ditch-ending—one resembling an everted *clavicula*—and that this was later discarded and replaced by a straight end—the apparent inner horn. The latter had a square drainage channel at the bottom like the first and second ditches.¹

At Newstead² and at Cadder,³ as at Castledykes, everted *claviculae* were found to have been filled in at a later date in order to give the ditch to which they belonged a straight finish. The *claviculae* at Newstead were certainly of Flavian date, those at Cadder possibly so; and there is in fact no evidence for the use of the *clavicula* in a fort laid out later than the first century. It may be regarded as certain, therefore, that the fourth west ditch at Castledykes was originally dug by Agricola troops, and that the typically first-century ending then given to it was discarded at the beginning of the Antonine occupation.

The ditch decreased gradually in width from 16 to 12 feet as it approached the north-west corner, where, for a short stretch, it widened again to about 22 feet. At a later date, this short stretch was reduced in width to about 12 feet by having an artificial scarp of gravel patched on.

There was nothing to indicate that the apparent widening of the ditch was due to its having originally come to a club-shaped end at this point and having been continued round the corner at a later date. On the contrary, the reuse of this ditch by Antonine troops, in preference to the third ditch, seemed to be best explained on the supposition that, unlike the third ditch, it had continued round the corner to run along the north front as early as the Flavian period. This supposition was confirmed by the discovery of Flavian pottery in loose earth lying along the outer margin of the ditch on the north front.⁴ The pottery had in all probability been thrown up from the ditch when it was being cleaned out, either during the Flavian period or at the beginning of the Antonine occupation.

¹ See Section through West Ditches (Trench 3, Pl. L).

² J. Curle, *The Fort of Newstead* (1911), p. 31

³ John Clarke, *The Roman Fort at Cadder* (1933), pp. 26-29.

⁴ See below, p. 144.

The abnormal width of the fourth west ditch at the north-west corner appeared rather to have served the purpose suggested for the hooked ending of the third ditch, namely that of breaking up a broad platform at this point. If this view is correct, the two ditches had probably possessed these particular features at one and the same time. It has been shown that the third ditch with its hooked ending belonged to the Flavian occupation, and had not been in use during the Antonine period.¹ In all likelihood, then, the fourth ditch had assumed an abnormal width at the north-west corner during the Flavian occupation, and had been reduced to normal dimensions at the beginning of the Antonine occupation.

The berm ditch was again found on the west side. It was 8 feet wide by $2\frac{1}{2}$ -3 feet deep, and lay partly under the front of the rampart. As on the east side, it had been filled in and levelled up after silt and vegetation to the depth of more than a foot had accumulated in the bottom. The levelling material consisted of a gravel spread about a foot thick, which at most points examined continued inwards to form the bedding in which the stone base under the front of the rampart was set. The weight of the rampart material above the base had caused it, in some places, to sag down into the ditch.²

No pottery was recovered from any of the sections cut through the berm ditch. Its date, however, was no longer in doubt. It had been levelled up with a gravel spread exactly similar to that covering the third ditch, and so must have been filled in at the same time as that ditch, that is, either during the Flavian period, or, as seemed more likely, at the beginning of the Antonine occupation.³ That the latter date was the correct one was now proved by the fact that the berm ditch had obviously been filled in with the deliberate intention of providing a level bed for the front of the (Antonine) rampart.⁴ Both ditches, then, had been in use in the Flavian period, and filled in at the beginning of the Antonine occupation.

¹ See above, p. 137.

² See Section through West Berm Ditch (Trench 4, Pl. XLVI).

³ See above, p. 137.

⁴ For the Antonine date of the rampart, see below, p. 140.

The berm ditch ended on the north side of the west entrance in a little tail which looked like a miniature everted *clavicula*. It could hardly have served the purpose of a *clavicula*, however, and may possibly have been intended to drain water into the ditch from a gutter flanking a road passing through the entrance.

The west rampart had a width of about 32 feet. The front 5-6 feet was founded on a stone base, the rest of it had been laid on the natural sand. Of the superstructure, the front 11-12 feet was made up of a turf cheek, about 7 feet wide, with a heavy bank of peat or clay behind.¹ These two parts keyed into one another and were clearly of contemporary build. The remainder of the rampart consisted of very mixed material, including clay, sod, sand and gravel, without stratification. The relation of the rear portion to the carefully constructed front was, however, such as to suggest that the two had been built together as one structure. As on the east side, no certain traces of an earlier rampart *in situ* could be distinguished in the body of the rampart as it now stands, although it is possible that some of the mixed material in the rear of the latter may have been reused from an earlier work.

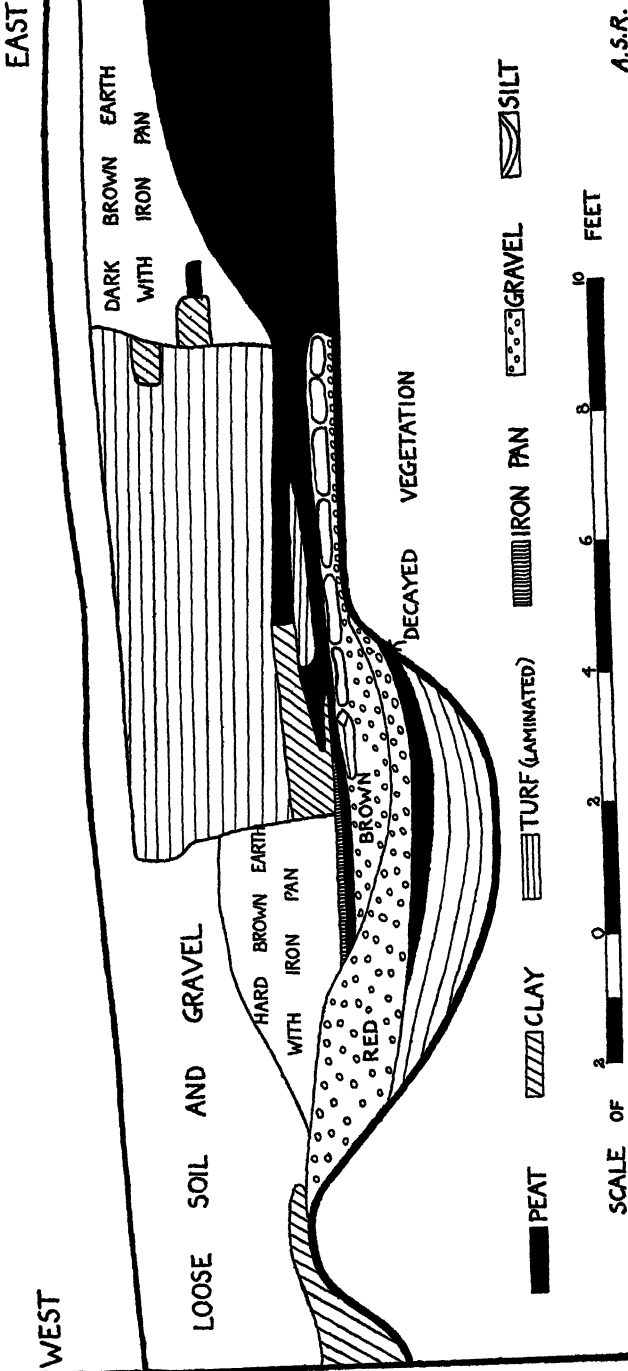
In a section cut on the north side of the west gateway,² the rampart was found to have a width of 38 feet. The back of the rampart at this point had originally been marked by a kerb of carefully laid turves, more than a foot high, and extending at least 3 feet along the rampart. The presence of a large tree made it impossible to determine its full extent. Over the kerb had spread rampart-slip which sealed a number of potsherds, all of Antonine date. The west rampart thus provided the same evidence as the east rampart of having been built in the Antonine period.

On top of the rampart-slip there had been set a low platform of large cobbles, about 6 feet square. From the inner edge of the platform a gravel layer, about 2 feet thick, sloped down slightly towards the interior of the fort, until at a distance of 10 feet from the back of the platform it met an *intervallum*-street which was laid on made-up soil containing Antonine pottery. The street and the platform therefore dated to the second Antonine occupation and the turf kerb to the first.

¹ See Section through West Berm Ditch (Trench 4, Pl. XLVI) and Section through West Rampart (Trench 5, Pl. XLVII).

² See Section through West Rampart (Trench 5, Pl. XLVII).

CASTLEDYKES: SECTION THROUGH WEST BERM DITCH (TRENCH 4)



The addition of 6 feet to the width of the rampart at this particular point was no doubt due to the necessity of providing a means of ascent to the rampart walk near the gateway. At Cawthorn, a 6-foot extension to the back of the rampart was found at the south gate of camp A, and identified as an *ascensus*.¹ At Burrens too, a stone revetment, found behind the north rampart in a similar position to the cobbled platform at Castledykes, appeared to have retained the end of a ramp or staircase.² It is probable that at Castledykes a ramp or staircase had given access to the rampart walk on the north side of the west gateway, and had been retained at the foot by a turf kerb in the first Antonine occupation and by a cobbled platform in the second. The purpose of the gravel layer would be to connect the platform with the *intervallum*-street of the second Antonine occupation.

Under this gravel layer, a little to the north of the turf kerb, there was found a mass of burnt clay, fire-reddened stones, charred wood, part of a quern of Andernach lava, glass, pieces of daub, one showing wattle-marks, and a large number of potsherds, most of them from amphorae. The pottery was all of Antonine date, with the possible exception of seven fragments of a red cordoned olla, which may well have been of Flavian manufacture.³ Further, although examination of the ground at this point was obstructed by tree roots, sufficient evidence was recovered to show that at the same level there had been at least one post-hole, and one or possibly two pits. These had been filled in, partly by rampart-slip and partly by deliberate levelling, before the gravel spread was laid down.

The remains in this area were very similar to those found behind the east rampart,⁴ and, like them, seemed to be the ruins of a structure of some kind. On the west side, however, the additional discovery of a post-hole and wattle-marked daub suggested that here at least the structure had been a wattle and daub hut or shed. The clay may have formed the flooring. As on the east side, it was uncertain whether the signs of burning were evidence of the purpose or of the fate of the structure.

¹ *Arch. Journ.*, lxxxix (1932), p. 31.

² *Proc. Soc. Ant. Scot.*, lxxii (1937-8), p. 305.

³ See below, p. 163.

⁴ See above, p. 134.

gateway. It seemed possible that here too the gravel surface had led to a ramp or staircase giving access to the rampart walk, although no actual traces of such were found.

THE WEST ENTRANCE

On the west side, as on the east, trees prevented any attempt to uncover structural remains of a gateway. The interruption of all five west ditches showed, however, that in both the Flavian and the Antonine periods there had been an entrance on this side at about the same point.

The approximate position of the Antonine gateway was determined by locating the road which had passed through it. Actually, it was found, there had been two successive roads, one laid directly on top of the other. The upper of the two roads was very close to the modern surface, and had been uprooted at many points. It was 20 feet wide, was flanked by gutters 3 feet wide, and had a hard gravel surface over a cobble bottoming. This was laid on made-up soil, below which, and resting on the natural sand, there was a hard surface of small cobbles and gravel. On it were found a few Antonine potsherds. From this it appeared that the upper road had been laid down in the second Antonine occupation, while the gravel surface represented the remains of an earlier road contemporary with the first Antonine occupation.

This dating was confirmed by the discovery that the gravel surface extended northwards from the line of the roadway as far as the end of the third ditch, and appeared to be continuous with the gravel spread with which that ditch was levelled up. The date of the levelling has been shown to be the beginning of the first Antonine occupation.¹ It may be noted, too, that the gravel surface at the gateway was similar to the gravel layer contemporary with the first Antonine occupation which was found under the secondary *intervallum*-street in a line with Trench 4.² The extension of the gravel surface from the roadway to the end of the third ditch suggested the possibility that in the first Antonine occupation, if not in the second also, the gravelled area between the second and fourth ditches, at least near the gateway, had been used as a parking place.

¹ See above, p. 139.

² See above, p. 142.

The secondary road from the gateway was traced westwards for about 60 feet, and even in that short distance was found to be inclining slightly towards the north-west. This inclination was reflected in the position of the ditch-ends, for the fourth ditch stopped short of the second, and the second stopped short of the first. There was no evidence for a change of ditch-plan, such as took place at the east entrance.¹ A short length of covered drain, its floor, sides and roof formed of flags, was found leading towards the end of the second ditch, but so little of it survived that its connections could not be traced.

THE NORTHERN DEFENCES

Trenching to the west of the north entrance revealed three main ditches, as well as the berm ditch. The first and second ditches were regularly V-shaped, with a width of 18-20 feet and a depth of about 5 feet, while the third ditch was only 10-12 feet wide by 4 feet deep. As the ground on this side of the entrance sloped down towards the north, the upcast from the second and third ditches had usually been thrown up on the northern margin. There it had been levelled out and in some places beaten very hard.²

Reference has already been made to the discovery of Flavian pottery in loose soil lying along the northern margin of the outermost north ditch.³ The pottery comprised some fragments of Samian ware (forms 18 or 18/31, 29, 37)⁴ and one of coarse ware.⁵ These were scattered finds from different sections and had in all probability been thrown up at some time when the ditch was being cleaned out, either during the Flavian period or at the beginning of the Antonine occupation. As has been stated, they confirmed the view that the fourth west ditch rounded the north-west corner to run along the north front as early as the Flavian period.

The berm ditch was 7-8 feet wide by 2-3 feet deep, and its inner lip lay just under the front of the rampart. As on the east and west sides,

¹ See above, p. 135

² See Section through North Ditches, Trench 6, Pl. L. In this particular section the upcast was found on the north side of the second ditch only

³ See above, p. 138

⁴ See below, pp. 160-162.

⁵ See below, p. 163.

it had been levelled up after more than a foot of silt had accumulated in the bottom. On the north side, however, the levelling material was different, consisting of a layer of heavy, peaty turf, over a foot in depth. At one point, at least, the stone base under the front of the rampart had sagged down slightly into the berm ditch.¹

The berm ditch had now been discovered under the Antonine rampart on the three sides of the fort that had been examined. A Flavian origin had also been established for that ditch, for the third and fourth west ditches and for the third north ditch. There was no longer any doubt that the Antonine fort had been preceded by a permanent Flavian fort with an area which was probably much the same as that of its successor, and with an elaborate defensive system.

The total width of the Antonine north rampart was 30-31 feet. In the section figured,² the rear 15-16 feet lay on the natural sand, the middle 9 feet on natural sand stepped down one foot lower, and the front 6 feet on a stone base. The ground had a slight downward slope to the north, and the cutting of a step in the sand was no doubt intended to provide a level bed for the front of the rampart.

Over the stone base the superstructure consisted of carefully laid turf; in the middle, of less well laminated turf and of peat; in the rear, of unstratified turf, sand and muddy material. The turf and peat midrib keyed into both front and rear in such a way as to indicate that all three were of contemporary build. The only element which might possibly have survived *in situ* from an earlier rampart was the low mound of dark brown muddy material behind the peat, and for such a survival there was no evidence. Similar results were obtained from other rampart-sections west of the north entrance.

A cobbled *intervallum*-street, about 20 feet wide, ran behind the rampart at a distance of 9-10 feet from it. Its outer edge had been laid down over rampart-slip, and the rest of it over made-up soil containing Antonine pottery. A few Antonine potsherds were also found just above the street. From this it was apparent that on the north, as on the east and west sides, the rampart had been erected in the first of two Antonine occupations, and that in the second the *intervallum*-street had been relaid

¹ See Section through North Rampart, Trench 6, Pl. XLVIII.

² Same section.

or repaired. At two points, at least, the secondary street had been connected with the back of the rampart by a gravel surface similar to those found near the north-west corner and on the north side of the west gateway.¹ As at the north-west corner, however, there were no actual traces of a ramp or staircase to which the gravel surface might be expected to lead.

East of the north entrance, the ditches, the rampart and the *inter-vallum*-street were traced almost as far as the north-east corner. Their disposition was the same as on the west side of the entrance, but certain differences in dimensions and structure were noted.

The third ditch was found to be no more than 10 feet wide and 3 feet deep.² Trenching near the north-east corner suggested that the ditch had narrowed and stopped short of it, leaving the other two ditches to continue round the corner and run along the east front. The end of the third ditch appeared to lie under a fence, and could not be located with certainty, but a glance at the Plan (Plate LVI) will show that it had probably stopped at about this point.

The outline of the third and second ditches proved to be less regularly V-shaped than on the west side of the entrance.³ The first ditch had a still more irregular profile. In one section⁴ it was found to have had a flat shelf in both scarp and counterscarp, while in two other sections nearer the north-east corner it showed a well-defined notch cut in its counterscarp.⁵ Unfortunately it was not possible to determine how far west of the north-east corner the notch had extended. Such irregularities in ditch outline are a not infrequent occurrence in Roman forts, and various suggestions as to their possible purpose have been put forward.⁶ The sections cut through the Castledykes ditch yielded no material on which to base an explanation of its irregular profile.

¹ Same Section, in which part of the gravel spread can be seen at the southern end.

² See Sections through North Ditches, Trenches 7 and 8, Pl. L.

³ See same Sections.

⁴ See Section through North Ditches, Trench 7, Pl. L.

⁵ See Section through North Ditches, Trench 8, Pl. L, and Section through First North Ditch, Trench 9, Pl. L

⁶ See, for example, Curle, *The Fort of Newstead* (1911), p. 30, and S. N. Miller, *The Roman Fort at Balmuldy* (1922), p. 5.

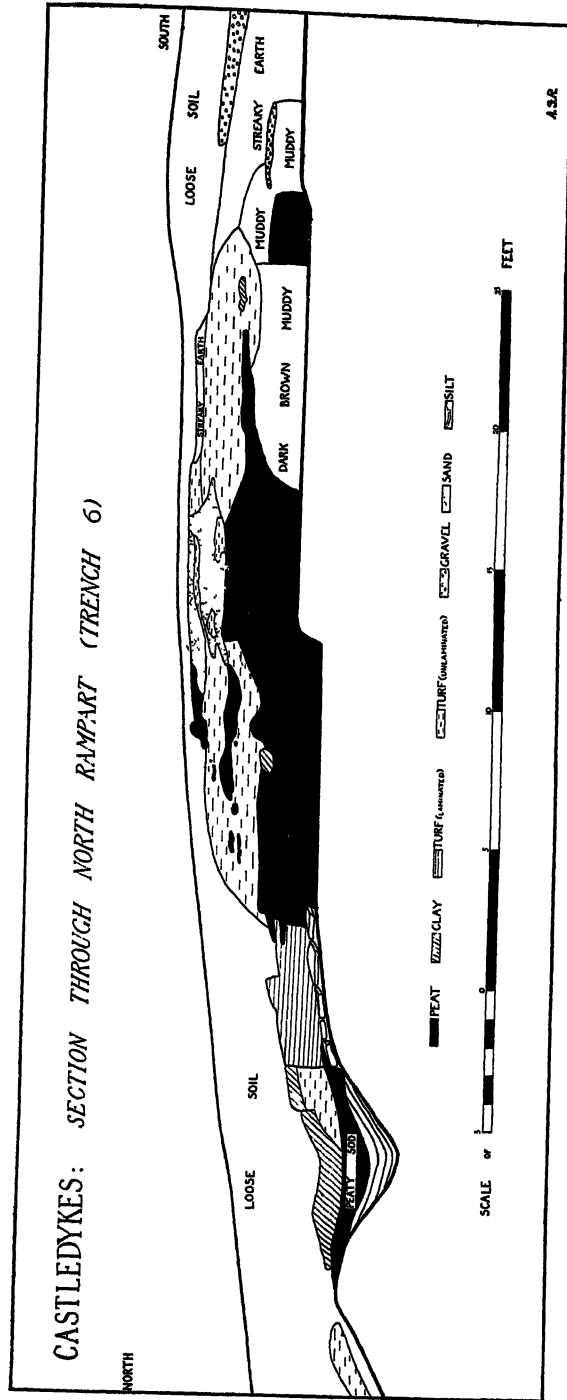
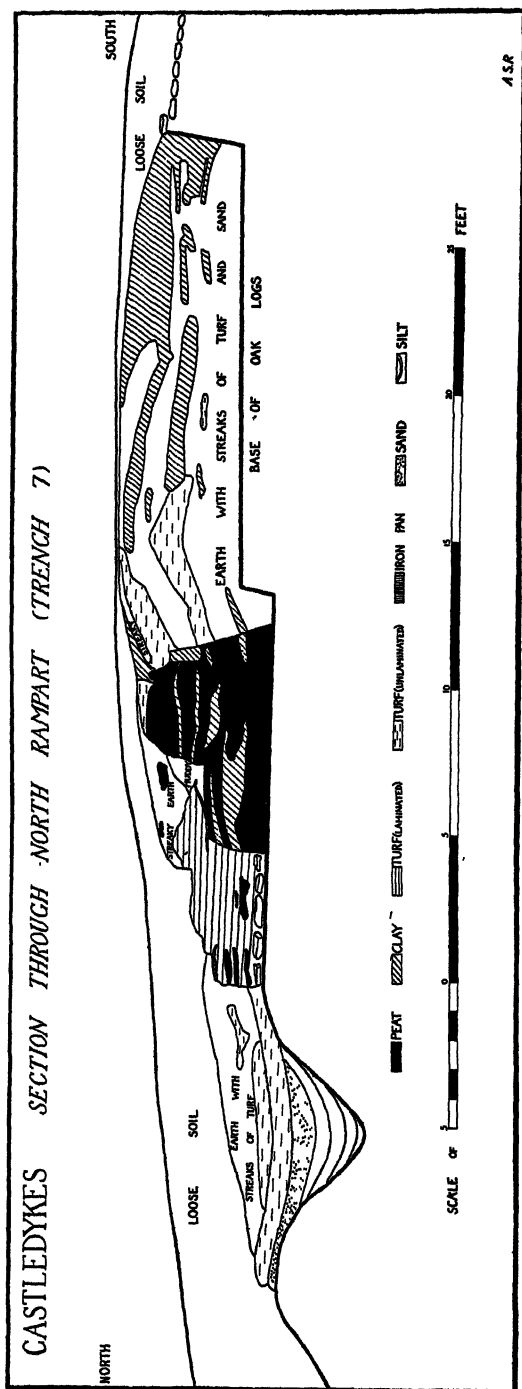


PLATE XLIX



One section cut through the berm ditch near the entrance produced the first potsherd to be found under the filling. It was the base of a red olla or beaker. Though not definitely datable, its fabric was consistent with Flavian manufacture. In another section, further east, the ditch had been filled in with a spread of sand, instead of the heavy peaty turf usual along the north side.¹

In this same section the construction of the rampart proved to be of special interest. The rear 16 feet had been laid on a base of oak logs, probably on account of the dampness of the ground at this point. This was caused by an underground spring, which welled up and covered the logs almost as soon as they were exposed to view. The middle of the rampart had been founded on the natural sand, and the front 5 feet, as usual, on a stone base. Of the superstructure, the middle part appeared to have been set up first. It took the form of an almost solid mass of peat, 8 feet wide and still standing to a height of about 4 feet. Against this peat midrib had been built the 5-foot-wide turf front, and the 16-17-foot-wide rear, which consisted of unlaminated turf, sand and clayey material. These three elements seemed to represent stages in the construction of a rampart which had been planned as a whole; there was nothing to show that any section of it had ever stood independently of the rest.

The back of the rampart at this point was overlaid by a cobbled surface which was traced, with some difficulty owing to its proximity to the modern ground-level, for about 30 feet southwards, where it seemed to end. This 30 feet of cobbling must represent the secondary *intervallum*-street and an extension of it to the back of the rampart similar to those already noted.²

In another section nearer the north-east corner, the customary interval between the rampart and the *intervallum*-street reappeared, though its width here was only 6 feet, while the width of the street was increased to about 26 feet. The outer edge of the street lay partly over a pit which contained a few Antonine potsherds and was therefore contemporary with the first Antonine occupation. Its inner edge was

¹ See Section through North Rampart, Trench 7, Pl. XLIX.

² See above, pp. 140, 142, 145-6.

separated by a 6-foot interval from a hard surface of small cobbles and gravel which was traced for 24 feet towards the interior of the fort.

THE NORTH ENTRANCE¹

The approximate position of the north entrance to the Flavian fort was indicated by an interruption of the berm ditch in the middle of the north side. The gap between the ditch-ends measured 60 feet across and did not coincide with a break in the Antonine rampart. The berm ditch stopped over 20 feet short of the rampart-end on the east side.

Unfortunately, the limited time available for excavation did not permit of an exhaustive search for structural remains which might be connected with a Flavian gateway. A number of post-holes were, it is true, found within the gap between the berm ditch-ends, but none of them could be assigned with certainty to a period previous to the construction of the Antonine rampart. The digging of post-holes for two successive Antonine gateways had no doubt disturbed, if not destroyed, any trace of earlier structural remains in the same area.

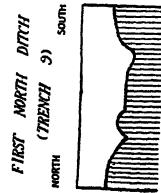
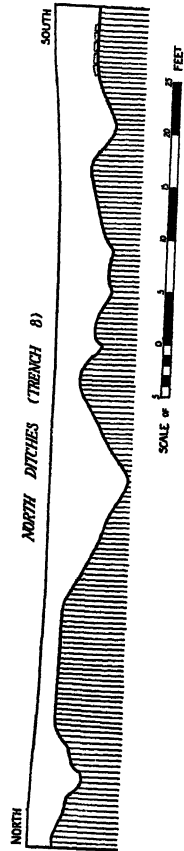
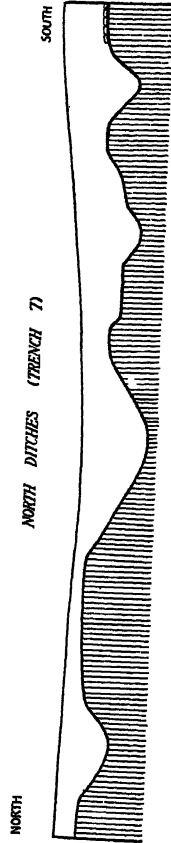
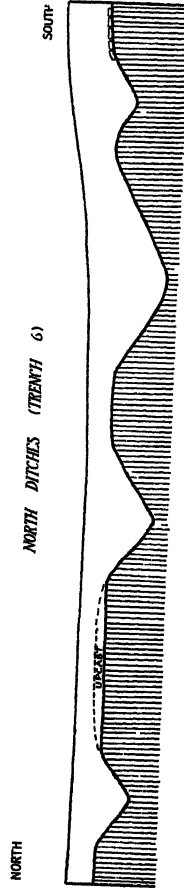
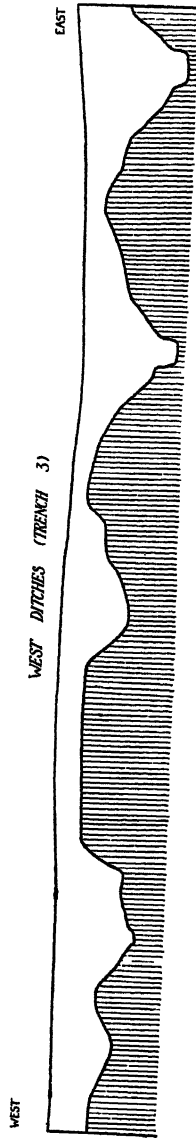
In the first Antonine occupation there had been a break of 36 feet in the middle of the north rampart. It was not possible to recover a complete plan of the gateway which had occupied this space, but sufficient evidence was obtained to indicate that it had taken the form of a central roadway flanked by timber guardhouses or towers.

Along the rampart-end on the west side of the entrance there were found three large post-holes, each measuring 2 feet in diameter by 2 feet deep. The two most northerly were 6 feet apart, and the third lay a little more than 2 feet to the south. Posts set in these holes would carry the wooden boarding which both retained the front 14 feet of the rampart-end and formed the west side of the west guardhouse.

Into the rear 16 feet of the rampart had been recessed a gravelled niche, 6 feet wide, at the two southern corners of which were found smaller post-holes, each 1 foot in diameter by 1 foot deep. A quantity of charred wood lay on the gravel. The width of the niche, 6 feet, was that usual for an *ascensus*. It may possibly have accommodated a wooden staircase leading to the rampart walk. In that case, the two small post-holes must have held posts flanking the lower end of the stairs.

¹ See Plan of North Entrance (Pl. LII).

CASTLEDYKES SECTIONS THROUGH DITCHES



A.S.R.

On the east side of the entrance it was possible to distinguish three post-holes which corresponded in dimensions and position with those on the west side, and must have been in use along with them. A gravelled niche was also present, recessed into the rear 16 feet of the rampart. No small post-holes were found on the south of the niche, but there was one large post-hole, 2 feet square by $3\frac{1}{2}$ feet deep, with a narrow gutter alongside. It was, however, uncertain whether this post-hole belonged to the first Antonine occupation, and, if so, what its purpose was.

The two rows of three post-holes on each side of the entrance fixed the depth of the flanking guardhouses at 14 feet. The length of their frontage had still to be determined. It was noted that the row of post-holes belonging to the second Antonine gateway included three which lay nearly in line with those of the first Antonine gateway.¹ It seemed very likely that in the first Antonine occupation these three had held posts supporting the west side of the east guardhouse. Such a guardhouse would have a frontage of 12 feet. It was not practicable to search for the row of post-holes which would be required for the east side of the west guardhouse. If, however, both guardhouses had had a frontage of 12 feet, the road between them must have been 10-12 feet wide.

The size of the post-holes, 2 feet in diameter by 2 feet deep, suggested that the uprights set in them had been very massive and intended to support a structure of considerable weight. The guardhouses, then, had probably taken the form of two-storied towers. The rampart walk would pass through the upper floors of the towers and be carried across the roadway by a timber gangway. The ground floor would be used as guardhouses.

The whole area between the rampart-ends was covered with gravel and small cobbling laid directly on the natural sand. This must represent the road surface and the floors of the flanking guardhouses.

Incomplete as it was, the plan of the first Antonine gateway invited comparison with that of the north gateway of the Flavian fort at Fendoch, which too had a frontage of 36 feet and consisted of a central roadway flanked by towers.² No exact Antonine parallel to the Castledykes gateway has so far been noted, but comparatively few timber gateways

¹ See below, p. 150.

² *Proc Soc Ant Scot*, lxxiii (1938-39), pp 115 ff

in earth or turf forts of the Antonine period have been completely excavated. In spite of its resemblance to the Fendoch gateway, there was nothing to indicate that the Castledykes gateway had been in existence before the construction of the Antonine rampart was planned.

In the second Antonine occupation, the break in the north rampart was reduced to 12 feet by the building of an extension, 24 feet long, on to the rampart-end on the west side of the entrance. The post-holes along this rampart-end were now filled in.

The extension was founded in front on a stone kerb, 3 feet wide. The rear part stood on the natural sand. The extension was much less carefully built than the rampart, its superstructure consisting mainly of uncoursed turf, with a few layers of laid turf immediately above the kerb. Further, it was only 25 feet wide, as compared with the usual 30-31 feet of the rampart.

Along the east side of the extension, four large post-holes were found, each about 2 feet in diameter by 2 feet deep. In them were many packing stones. The second post-hole from the front had been dug through forced soil, and had clearly not been in existence until the second Antonine occupation. The other three may have originated in the first Antonine occupation,¹ but had certainly been in use in the second. Immediately to the north of the most southerly post-hole, there was a smaller slanting one, 1 foot in diameter by 1 foot deep. It may have held a strut for the fourth post.

A niche or chamber floored with gravel or small cobbling appeared to have been recessed into the rear part of the extension, to the south of the row of post-holes. Owing to the confused character of the remains at this point, it was impossible to ascertain its dimensions and purpose.

On the east side of the gateway, in the second Antonine occupation, a new post-hole, 2 feet in diameter by 2 feet deep, was dug between the two most northerly post-holes of the first Antonine series. Like the corresponding one on the west side of the gateway, it had been dug through forced soil. The three post-holes of the previous occupation remained in use. The gravelled niche recessed into the rear of the rampart may also have been reused.

¹ See above, p 149



POST-HOLES ALONG NORTH FRONT OF RAMPART ON EAST SIDE OF NORTH
GATEWAY, CASTLEDYKES

There was, then, a row of four post-holes covering a length of 14 feet on either side of the second Antonine gateway. Uprights set in these post-holes would carry the wooden boarding required to retain the end of the extension and the rampart-end on the east side of the gateway respectively. They would also support a single tower, spanning the entrance passage and carrying the rampart walk across it. The tower would have a depth of 14 feet and a frontage of 12 feet. The road which passed under it would have a width of about 9 feet. Traces of its cobbling still survived.

The device of spanning an entrance passage with a single tower was in use at various periods for narrow gateways in earth or turf forts. Examples can be quoted both from the Flavian fort at Fendoch,¹ and from the Antonine fort at Mumrills.²

Immediately to the east of the gateway, three post-holes had been recessed into the outer edge of the stone base under the front of the rampart (Plate LI). They were separated from one another by intervals of 2-3 feet, and, like the postholes of the two successive Antonine gateways, measured 2 feet in diameter by 2 feet deep. An iron nail and a number of packing-stones were found in them.

A careful search disclosed no evidence for the digging of post-holes in a similar position on the west side of the gateway, either during the first or during the second Antonine occupation. No attempt had been made to cut into either the stone base under the front of the rampart, or the stone kerb under the front of the extension (Plate LI). Consequently the date and the purpose of the postholes to the east of the gateway remained uncertain. It may be suggested, however, that they had been inserted into the rampart base to hold struts or braces to the rampart walk and its parapet, after the rampart front at this point had been damaged or had collapsed.

If this view is correct, the damage or collapse of the rampart-end on the east side of the gateway was probably coincident with some serious damage which had befallen the whole of the first Antonine gateway. That this gateway had in fact been extensively damaged, if not completely destroyed, was suggested both by the discovery of charred wood in the recess on the west side, and by the construction of an entirely new gateway,

¹ *Proc. Soc. Ant. Scot.*, lxxiii (1938-39), p. 120.

² *Proc. Soc. Ant. Scot.*, lxxiii (1928-29), p. 411.

with a much reduced frontage, in the second Antonine occupation. Such a radical reconstruction would hardly have been undertaken unless occasion had been given for it by the destruction of the previous structure.

The reduction in the frontage of the gateway at the beginning of the second Antonine occupation was no doubt carried out in expectation of disturbed conditions. The expectation was fulfilled. The presence of charred beams and burned clay on the site of the second Antonine gateway was significant of its fate.

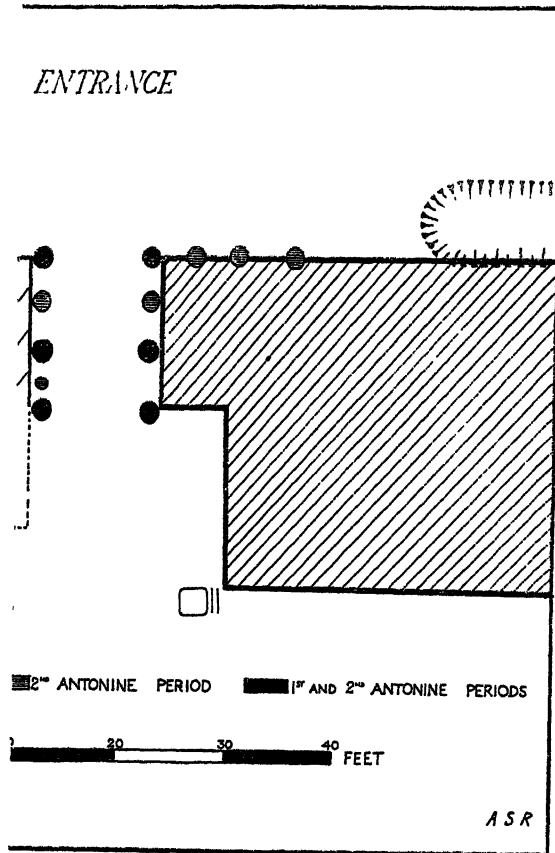
The interruptions in the three main ditches which are shown on the Plan (Plate LVI) indicate the course taken by the passage from the gateway during the second Antonine occupation. Between the gateway and the third ditch, no traces of road cobbling or of gravel survived, nor were any cover-stones found lying across the gutters leading to the first and third ditch-ends. North of the third ditch, however, cobbling was uncovered which extended over a considerable area but tailed off without leading anywhere. It was laid on made-up soil containing Antonine pottery and so dated to the second Antonine occupation.

There were signs that the course taken by the passage through the ditches had not always been exactly the same. The banks between the ends of the second and third ditches proved to be formed, not of natural sand, but of made-up soil beaten very hard. The depth of this made-up soil, 2-3 feet, was such as to suggest that it had filled up depressions which had probably been earlier ditch-ends. Unfortunately, no pottery was found in or under the made-up banks to give a clue to their date.

Further evidence of a change of ditch-plan at the north entrance was provided by a narrow trench (CD, Plate LVI) which ran northwards from a gutter at the end of the first ditch on the west side of the entrance. At their point of junction, the gutter and the trench were both 2 feet wide by $2\frac{1}{2}$ feet deep, but the trench increased gradually in width and depth to 3 feet. Trench CD had been cut away by the second ditch, but was picked up again 12 feet south of the third ditch. North of that ditch, it was found at a depth of 2 feet below the cobbling of the second Antonine occupation, and was traced northwards for about 20 feet until it was swallowed up by an outlying ditch.¹ In this stretch two flagstones were discovered lying across the trench.

¹ See below, p 155

PLATE LII



Trench CD had silted up to a depth of over a foot and had then been sealed up with a layer of white clay or clayey sod. The depth of the silt suggested that the trench was of Flavian origin and had been filled in at the beginning of the Antonine period. This dating was later confirmed.¹ Further, the fact that trench CD led from a gutter of the same dimensions as itself at the end of the first ditch implied that the gutter and ditch, like the trench, were of Flavian origin. The only alternative explanation of their junction, namely that the gutter had been cut through the end of the trench by pure accident in the Antonine period, did not seem very likely. It is true that the gutter had not been filled in, as had the trench, but that would simply mean that it had remained in use during the Antonine period.

The connection of trench CD with the gutter and the discovery of a few flagstones spanning it indicated that the trench had been in use as a drainage channel, its purpose apparently being to drain water down the slight slope from the Flavian north gateway. The trench, however, bore such an unnatural relation to the second and third ditch-endings shown in the Plan (Plate LVI) as to leave no doubt that these occupied a different position from the Flavian ditch-endings. A remodelling of the Flavian ditch-plan at the north entrance must therefore have taken place, doubtless at the beginning of the Antonine occupation, when the Flavian drain CD had been discarded. Unless, then, another alteration in ditch-plan had taken place in the second Antonine occupation, the artificial banks between the second and third ditch-ends must have been constructed in the first Antonine occupation. In that case, since evidence of alteration was present in both the second and the third ditches, the second ditch, like the third, must have been of Flavian origin.

It was no longer possible to recover the exact details of the Flavian ditch-plan, but the positions of the trench CD and of the artificial banks suggested that the interruptions in the second and third ditches had lain further to the east during the Flavian occupation than during the Antonine period. The reuse by Antonine troops of the Flavian gutter at the end of the first ditch on the west side of the entrance indicated that little if any change had been made in that ditch-end. The first

¹ See below, p. 155.

THE FORTS

the fort can be taken as representative, it may be found to connect up with a similar ditch (EF, Plate LVI) discovered outside the eastern half of the north side of the fort.¹

That, in the Antonine period at least, the level ground outside the northern half of the east side was occupied by an annexe was suggested by the discovery, far out on the east side, of four fragments of Samian ware and one of a mortarium, all of Antonine date. If this area was so utilized, the diversion of the road from the east entrance, or, as seemed more probable, the addition of a branch or loop to it, must have been intended to give access to, or a passage through, the annexe. The presence of an annexe, however, must remain a matter of conjecture until the area outside the north half of the east side of the fort, from the east entrance to the fence at the north-east corner, has been further explored.

THE WESTERN DEFENCES²

Four main ditches were discovered on the west side, the two inmost being each 20 feet wide by 7 feet deep, the third 15 feet wide by 4 feet deep, and the fourth 16 feet wide by 3-4 feet deep.³ The first and second ditches, besides being the deepest, were regularly V-shaped, with a square drainage-channel, 2 feet wide, at the bottom. They narrowed from 20 to 18 feet as they approached the north-west corner, but regained their usual width after rounding it. In the first ditch there was much rampart material, and in both first and second ditches the filling contained building-stones, glass and Antonine pottery. This was doubtless the result of post-Roman levelling.

The third ditch, on the other hand, had silted up naturally to a depth of 2 feet, and had then been deliberately filled in with clay, sand and gravel, and levelled over with a spread of red gravel. This gravel spread extended also over the platform between the third and fourth ditches. In the silt below the ditch-filling there were found a few large stones, some decayed wood, an ox-tooth, a few amphorae fragments, four

¹ See below, p. 157.

² On the west side the subsoil varied from white or light-brown sand to red gravel, and this variation, combined with the obstruction caused by tree roots, added greatly to the difficulties of interpretation.

³ See Section through West Ditches (Trench 3, Pl. L).

About 20 feet to the south of the outlying ditch, and roughly parallel with it, there was a narrow trench running east to west (EF, Plate LVI). Its western tip was cut away by the southern end of the outlying ditch, and it was traced eastwards almost as far as the north-east corner of the fort. It showed no signs of rounding the corner but appeared to run straight on eastwards. The trench widened rapidly from 3 feet at its western end to 5 feet and was $2\frac{1}{2}$ -3 feet deep, with steep sides sloping sharply down to a narrow bottom not more than a foot wide. A few scraps of decayed wood were found in it.

At its western end, trench EF appeared to be about to make a junction with the north-south trench CD. Since, however, both trenches had been swallowed up by the outlying ditch at this point, it was impossible to determine whether a junction of the two had ever taken place. If it had not, trench EF must have come to an end within the width of the ditch. It was not found to the west of it.

Like trench CD, trench EF had silted up to a depth of over a foot, and had then been sealed up with a layer of white clay or clayey sod, at least a foot thick. Under this layer, at the western end of the trench, there were found a number of potsherds, all of Flavian date. Three of them were of Samian ware (forms 18/31 and Curle Type 6)¹ and thirteen of coarse ware.² Trench EF had therefore been open in the Flavian period and filled in either later in that period or at the beginning of the Antonine occupation. Confirmation of the latter date was provided by the fact that the trench had silted up to a depth of over a foot before being levelled up, just as had the berm ditch and third west ditch. The trench must have been filled in at the same time as the ditches, that is, at the beginning of the Antonine occupation.³ No pottery was found in trench CD, but the exact similarity of the levelling material in both trenches showed that they had been filled in at the same time. Trench CD, too, must have been open in the Flavian period and disused at the beginning of the Antonine occupation.⁴

The destruction by the outlying ditch of any evidence for or against the junction of trenches CD and EF made it impossible to decide whether

¹ See below, p 161

² See below, p 164

³ See above, p 139

⁴ See above, p 153

trench EF, like trench CD, had been simply a drainage channel. At the points where both trenches were cut away by the ditch they were certainly of the same width and depth, but for most of its length trench EF was almost twice as wide as trench CD.

Trench EF had, in fact, the appearance of being a palisade trench rather than a drain. It may be compared, for example, with the outlying palisade trench at Cadder, which was 5 feet wide by 3 feet deep and contained cobbles and timber.¹ A few scraps of decayed wood were found in trench EF. At Cadder, the palisade trench appeared to have been accompanied by two outlying ditches. Similarly at Castledykes, if trench EF had held a palisade, the outlying ditch, if of Flavian origin, may have served as its outer defence. It is true that the western tip of trench EF had been cut away by the ditch-end, but the ditch may not have extended so far south until the beginning of the Antonine occupation, when the trench had been filled in.

If, however, trench EF had held a palisade, it did not seem likely that it had been in use during the occupation of the Flavian fort. A palisade running parallel to the fort defences and at a distance of only 40 feet from them would provide cover for the enemy rather than a protection for the garrison. Moreover, the area enclosed by a palisade in that position would be of insignificant extent, particularly if the palisade was backed by a mound.

The possibility therefore suggested itself that if trench EF had held a palisade it had formed part of a temporary Flavian enclosure preceding the permanent Flavian fort, on the construction of which the palisade would be removed. This possibility need not be discounted by the consideration that trench EF had, apparently, not been filled in until the beginning of the Antonine occupation.² Even if the trench had been in existence before the construction of the Flavian fort, it may have been kept open during the occupation of that fort for some purpose, possibly to carry a low fence, or to serve as a drain. It may be added that, if the outlying ditch had originally accompanied the palisade of a temporary Flavian work, it may have been reused during the occupation of the

¹ John Clarke, *The Roman Fort at Cadder* (1933), pp. 31 ff.

² See above, p. 155.

permanent Flavian fort to mark off a narrow enclosure on the east half of the north front, just as it did in the Antonine period.

Only future excavation, however, can settle beyond doubt the origin and function of trench EF and determine whether the trench or the outlying ditch had ever enclosed an area on the north half of the east side of the fort. It may even be found that one or other of these connected up with the narrow east-west ditch outside the east gateway.¹

Also of Flavian origin was a slightly curving trench to the north-west of the entrance (AB, Plate LVI). It was 60 feet long, nowhere more than 4 feet wide and only 1½ feet deep. It had a rounded bottom and tapering ends. The eastern end had been cut away by the southward curve of the outlying ditch, and in the bottom of the trench were found nine coarse-ware potsherds, all probably of Flavian date and none certainly of Antonine date.² The trench had therefore been open in the Flavian period. There was no sign that trench AB had been filled in, as had trenches CD and EF, but a trench so shallow and narrow would silt up very quickly of itself.

Trench AB was not wide or deep enough to have constituted an obstacle in itself, and its shallowness and tapering ends made it unsuitable to hold a palisade. It may possibly, however, have provided a bed for an obstacle of some kind, as appeared to have been the function of the shallow trenches outside the east gate of the Claudian fort at Vetera,³ or it may simply have marked the position for a ditch the digging of which was never completed.

The position of trench AB, lying along the flank of the flat ground outside the east half of the north front, and overlooking the downward slope to the north-west, suggested that, had it held an obstacle, its purpose would have been to check a charge up the slope. Whether, however, it had been intended to cover an exit from the Flavian fort towards the north-west and protect the flank of an enclosure on the east half of the north front of that fort, or whether it had been connected with the entrance to an earlier Flavian enclosure, must also remain undecided until further excavation has been carried out.

¹ See above, p. 136.

² See below, p. 165

³ *Bonner Jahrbucher*, 119 (1910), p. 247

THE INTERIOR OF THE FORT

Time did not permit of a methodical search being made for structural remains inside the fort, but the extension of sections cut through the defences revealed a few traces of gutters and trenches.

THE FINDS¹

Finds of worked stone, apart from building stone, were few. They included a small weight of Tinto felsite ($4\frac{1}{4}$ inches by $2\frac{3}{4}$ inches), and the upper stone and another fragment of a quern of Andernach lava (8 inches by 5 inches). There were also several pieces of shale. All the identifiable wood recovered was oak, but none of it showed any definite shape. Bone was represented by a solitary ox-tooth and by a fragment which may possibly have been human.

The bronze finds comprised a handle ($6\frac{1}{4}$ inches by $1\frac{1}{2}$ inches), a finger-ring ($\frac{3}{4}$ of an inch in diameter), a piece of an armlet ($1\frac{1}{2}$ inches by $\frac{1}{4}$ of an inch), a tiny bell ($1\frac{1}{4}$ inches in diameter) and a few fragments of uncertain use (Plate LIII, A, 1-4). The handle was exactly like those of a ladle and colander found at Glenshee, in Perthshire,² and had probably belonged to a similar vessel. The bell had two girth-grooves round the shoulder and in shape resembled a rather larger bell from Templebrough.³

The iron objects were for the most part very badly preserved, but after cleaning revealed themselves as a sickle 14 inches in length, with a tang for insertion in a handle, a large flat ring (8 inches by $5\frac{1}{4}$ inches), a tanged knife (7 inches by 2 inches), a heavy bolt (7 inches by 1 inch), several nails and what appeared to be a linch-pin ($5\frac{1}{2}$ inches in length) (Plate LIII, B, 6-10). The sickle was of a different shape from the Newstead

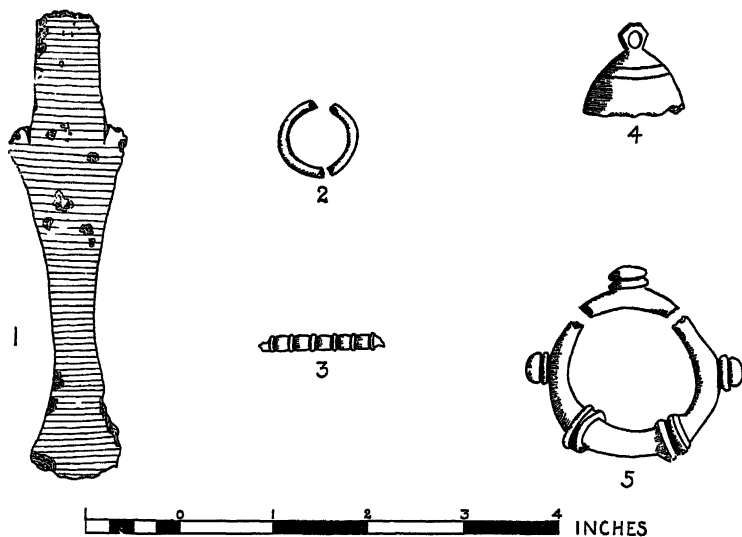
¹ With the exception of the upper stone of a quern of Andernach lava, which was left with the owner of the site, Mr Daniel Stewart of Corbiehall, the small objects found in the course of the excavations were deposited in the Hunterian Museum, Glasgow University

Finds of stone were examined by Dr Ethel Currie of Glasgow University, those of wood were examined by Dr Mary Calder, also of Glasgow University, and by the Forest Products Research Laboratories, and those of bone by Miss Margery Platt, of the Royal Scottish Museum, Edinburgh

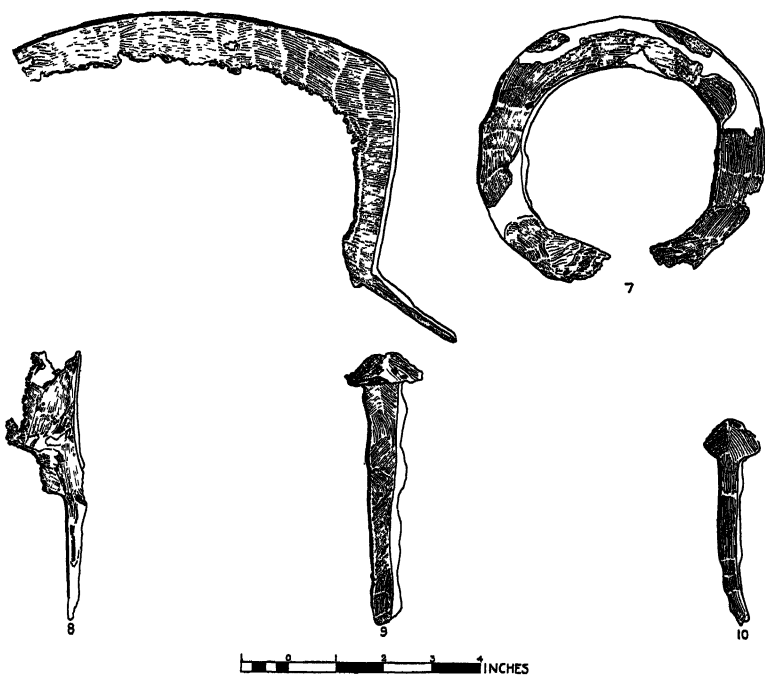
² *Proc Soc Ant Scot*, lxxvi (1931-32), p 306, Fig 16

³ Thomas May, *The Roman Forts at Templebrough* (1922), Pl. xiv, 18

PLATE LIII



A. OBJECTS OF BRONZE AND LEAD FROM CASTLEDYKES



B. OBJECTS OF IRON

sickles and scythes,¹ but resembled one in the London Museum,² except that it had a longer blade. The ring and the bolt had exact counterparts at Mumrills,³ and the knife could be paralleled from many sites, among them Newstead⁴ and Brecon.⁵ The object which appeared to be a linch-pin had a short stem and flattened head like the linch-pins from Newstead⁶ and Mumrills,⁷ but its head lacked a loop for the attachment of a thong.

The lead proved to be of unexpected interest. Two large amorphous pieces were found in the burnt area behind the east rampart, another in loose soil on the west side, and two more on the north side, one south of the *intervallum*-street, and the other outside the north entrance. They were all assayed by Dr. Smythe, of King's College, Newcastle-upon-Tyne, and found to be almost pure lead, so low in silver content that they must have been desilverized. They thus agreed in composition with most Roman lead. Dr. Smythe's general examination indicated that the Castledykes examples were furnace lead, that is, residue left in the furnace after smelting. The smelting must have been carried out on the site, since there would have been no reason for bringing the waste material alone from elsewhere. Castledykes is the most northerly point in Britain from which evidence for Roman lead-smelting has been recovered. The lead very possibly came from the Leadhills in Lanarkshire.

Dr. Smythe's report lent special interest to the discovery of a terret-ring of pure lead (2-2½ inches in diameter), which was found in loose soil on the west side of the fort (Plate LIII, A, 5). It may have been made on the site, perhaps as a trial piece, since a lead terret-ring would have been rather soft for actual use. In shape the ring conformed to the characteristic Celtic variety in bronze, with projecting bosses. Examples of this type have been found at Newstead⁸ and Traprain Law, Haddingtonshire.⁹

¹ J. Curle, *The Fort at Newstead* (1911), Pls. lxi, 2 and 5, and lxii

² R. E. M. Wheeler, *London in Roman Times* (1930), Pl. xxxiv, 4

³ *Proc Soc Ant Scot*, lxiii (1928-29), Fig. 124, 18, and Fig. 126, 17

⁴ Curle, *op cit*, Pl. lx, 7.

⁵ R. E. M. Wheeler, *The Roman Fort at Brecon* (1926), Fig. 60, 15.

⁶ Curle, *op cit*, Pl. lxx, 1, 3 and 6

⁷ *Proc Soc Ant Scot*, lxiii (1928-29), Fig. 124, 5

⁸ Curle, *op cit*, Pl. lxxv, 2

⁹ *Proc Soc Ant Scot*, xlix (1914-15), p. 182, Fig. 32, 1

Finds of glass included one piece of window glass and several fragments of green bottles, both straight-sided and cylindrical. There were also two of the melon-shaped beads of blue vitreous paste which are found on almost all Roman sites. Finds of clay comprised one broken drain-pipe (6 inches long and tapering in diameter from $2\frac{3}{4}$ to 2 inches), several pieces of daub, one showing wattle marks, and a few flue and floor tiles, the former scored with a 'key' to hold wall-plaster.

As usual, however, pottery formed the main bulk of the finds. Fragments from nearly 160 Samian-ware vessels were turned up, of which the following 20 were of Flavian date :—

1. Fragment of a decorated bowl (form 29), showing the central moulding and above it part of a dog (possibly Déchelette 915). From third west ditch.

2. Fragment of a decorated bowl (form 29), showing only the rouletted rim. From third west ditch.

3. Fragment of a decorated bowl (form 29), showing the carination with traces of a scroll below. From loose soil north of the third north ditch.

4. Fragment of a decorated bowl (form 29), showing only the rouletted rim. From loose soil north of the third north ditch.

5. Fragment of a decorated bowl (form 29), showing central moulding, with traces of a winding scroll above and below. From outside north entrance.

6. Fragment of a decorated bowl (form 29), showing the rouletted rim and part of a rabbit (Déchelette 942). From the filling-in.

7. Fragment of a decorated bowl (form 29), showing only the rouletted rim. Unstratified.

8. Fragment of a decorated bowl (form 37), of very fine hard clay with glossy glaze, showing an ovolo with an annular terminal separated from the decorated zone by a wavy line. All that was visible of the decoration was part of a fine scroll with a leaf resembling that on a Flavian bowl (form 37) from Margidunum¹ and on a bowl (form 29) from Strassburg.² From third west ditch.

¹ Oswald and Pryce, *Terra Sigillata* (1920), Pl. xv, 2

² R. Knorr, *Die Terra-Sigillata Gefässe von Aulungen* (1912), Pl. viii, 3

9. Fragment of a decorated bowl (form 37), showing the lower part of the decorated zone bordered by a straight wreath, a feature characteristic of Flavian bowls of this shape. Several examples were found at Newstead¹ and Pompeii.² From loose soil north of third north ditch.

10. Fragment of a decorated bowl (form 37), showing similar straight wreath immediately below ovolo. This feature also occurred on Flavian bowls (form 37) at Newstead.³ From the filling-in.

11. Fragment of a globular decorated pot (form 67), showing traces of a winding scroll. This rather uncommon form was in use in the late first century, and has never been found in connection with an Antonine occupation. Examples have been recorded from Rottweil⁴ and Newstead.⁵ From outside north entrance.

12-14. Three fragments of curvilinear cups (form 27), all of very fine clay and glossy glaze. 1 from third west ditch, 1 from third north ditch and 1 unstratified.

15-16. Two fragments of platters (form 15/17). 1 from behind east rampart, 1 from outside west entrance.

17. Two fragments of a platter with very shallow upright side (form 18 or 18/31). From trench EF on north front.

18. Fragment of a flat-bottomed platter (form 18 or 18/31), stamped [O]F CRESTIO. Crestio or Crestus was a prolific potter of La Graufesenque, who, according to Oswald,⁶ was at work from Claudius to Vespasian. Exactly similar stamps to that from Castledykes have been found on platters (forms 18 and 18/31) at Cirencester, London, Richborough and York. From loose soil north of third north ditch.

19. Fragment of spreading platter (Curle Type 6), with rouletted ring on inside bottom. From trench EF on north front.

20. Fragment of a vessel of uncertain type, of very hard clay with glossy glaze. From third west ditch.

¹ Curle, *op. cit.*, pp 207, 3, 213, 9-11, 215, 9

² *Journ. of Roman Studies*, iv (1924), pp 27 ff

³ Curle, *op. cit.*, Pl. xl, 13; xli, 14

⁴ R. Knorr, *Die südgallische Gefässe von Rottweil* (1912), Pl xvii, 16.

⁵ Curle, *op. cit.*, p. 200

⁶ Felix Oswald, *Stamps on Terra Sigillata* (1931).

Besides these certain Flavian pieces, there were 10 fragments which were probably of Flavian date.—

21-23. Three fragments of curvilinear cups (form 27) of good ware. Unstratified.

24. Narrow cup base (probably from 27), stamped VIIA. From north entrance.

25-28. Four fragments of platters (form 18/31), with very shallow, fairly upright sides. 2 from loose soil north of third north ditch, 1 from north entrance, and 1 from the filling-in.

29-30. Two fragments of very finely moulded, almost flat bases of platters (probably from 18/31). 1 from the filling-in, 1 unstratified

The Samian ware therefore included fragments from at least 20, and possibly as many as 30, vessels of Flavian date.

The following sherds of Samian ware, representing 120-130 pots, were certainly of Antonine date —

31. Fragment of a decorated bowl (form 30).

32-51. Twenty fragments of decorated bowls (form 37).

52. Twelve fragments of a platter decorated *en barbotine* (form 36).

53. Fragment of a curvilinear cup (form 27), of soft light brown clay with dull glaze.

54-58. Five fragments of straight-sided cups (form 33).

59-113. Fifty-five fragments of platters (form 18/31 or 31). The base of one of these bore the incomplete stamp [C]VCC[ILL], while that of another was marked ALBINI M. According to Oswald,¹ Cuccillus and Albinus were Hadrian-Antonine potters of Lezoux. Platters stamped by the former have been found at Corbridge and Caerwent, and by the latter at Wroxeter. A cup made by Cuccillus occurred at Balmuildy, on the Antonine Wall.²

114-115. Two fragments of bases of heavy platters showing a rouletted ring (probably Ludowici Sb).³

116. Two fragments of a flanged bowl (form 38).

117. Two fragments of a cordoned bowl (form 44).

118-119. Two fragments of a bowl of uncertain type.

¹ *Op. cit.*

² S. N. Miller, *The Roman Fort at Balmuildy* (1922), p. 70.

³ See, for example, S. N. Miller, *The Roman Fort at Balmuildy* (1922), p. 64.

120-121. Two scraps from the lips of beakers (?).

122-156. Twenty-five nondescript fragments.

Among the hundreds of datable sherds of coarse-ware vessels that were recovered, the following could be assigned to the Flavian period :—

1. Fragment of a mortarium of hard cream clay, liberally sprinkled with grit over inside and rim. The rim was very broad and fairly level, except at the outer edge. Similar rims were found at Newstead.¹ From the filling-in. (Plate LIV, 1)

2. Fragment of a very thick-walled mortarium, of hard red clay, well sprinkled with grit. The rim sloped down, but the strikingly solid, unusual appearance of the vessel was strongly suggestive of a Flavian date. From loose soil north of third north ditch. (Plate LIV, 2)

3. Several fragments of a screw-necked jug of hard white clay. The neck had five ridges and may be compared with early jug-necks from Newstead.² From make-up of *intervallum*-street, on west side. (Plate LIV, 3)

4. Three fragments of a rustic-ware olla, of hard red clay. From shallow pit within hooked end of third west ditch.

5. Fragment of a rustic-ware olla, red inside and grey outside. From shallow pit within hooked end of third west ditch.

6. Fragment of a rustic-ware olla, of hard red clay. From outside north entrance

7. Two fragments of a rustic-ware olla, of hard grey clay. From outside north entrance.

8. Five fragments of a hard grey olla or beaker, with sharply everted bead-rim, grooved both on the inside and on the outside, with outcurving shoulder also grooved. In shape it strongly resembled rustic-ware pots of the first century, such as were found at Newstead.³ From behind east rampart. (Plate LIV, 4)

9. Several fragments of a gritty red olla, brown-slipped, with upstanding lip and sharply everted, cordoned shoulder. This was an uncommon type, but could be paralleled from Newstead,⁴ and Old

¹ Curle, op. cit., p. 264, Nos 1-3 and 5.

² Ibid. p. 262

³ Ibid., p. 246 and Pls xlv₁, 29, xlv₁₁, 36; h, 3.

⁴ Ibid., Pl xlv₁, 28

Kilpatrick.¹ The example from Newstead was certainly of Flavian date, that from Old Kilpatrick possibly so. From behind west rampart. (Plate LIV. 5)

10-14. Thirty-six fragments, all found together in one of the sections cut through the third west ditch. They formed a homogeneous group, being all of fine clay, with a thin slip and smooth surface. Most of them were scraps of body, and it was impossible to tell how many vessels were represented. There were at least five, however, for the group included five rims, three belonging to ollae, and two to bowls. One of the ollae fragments came from a pot with fairly upright rim, and sharply out-curving shoulder. Another had a hollowed rim, undercut on the outside. The third olla-fragment had no definite rim, but its bulging shoulder suggested for the complete pot a shape similar to that of an early Newstead vessel.²

One of the bowl-rims, of very hard buff ware, with darker slip, also had an exact parallel at Newstead.³ The other, of softer clay, had a plain lip, with several grooves below, and was of less certainly Flavian date than its companions. There was nothing, however, in its fabric or shape to suggest that it was Antonine.

Among these fragments, therefore, there was not one of the common Antonine types, while four were certainly Flavian and the others were of the same fabric. There seemed no doubt that all were Flavian. (Plate LIV, 6-10)

15-22. Thirteen fragments found under the clay filling at the west end of trench EF. They represented eight different vessels. One fragment came from the lip of an olla or beaker of hard grey clay, burned black at the core. It was grooved on top of the rim, and its fine workmanship, coupled with its resemblance to a Newstead example,⁴ strongly suggested a Flavian date. Two came from the body of ollae or beakers of very fine pink clay, each with two or more girth-grooves. Two came from the bases of ollae, one of extremely hard fine red clay, burned grey

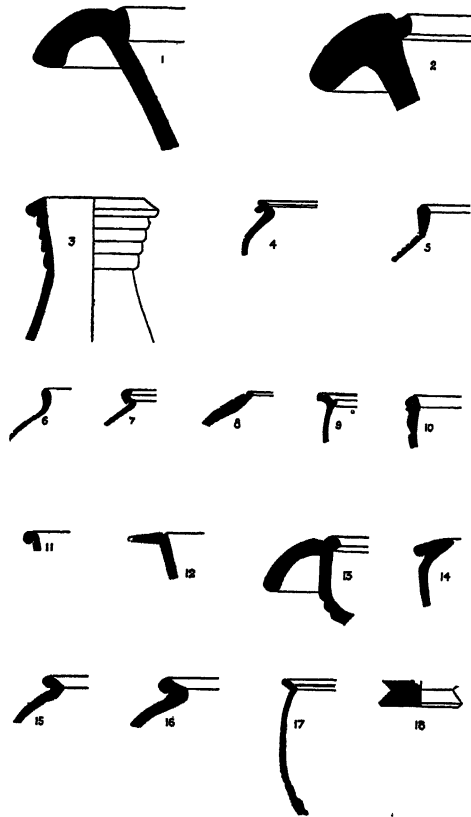
¹ S. N. Miller, *The Roman Fort at Old Kilpatrick* (1928), Pl. XXI, 1.

² Curle, *op. cit.*, p. 245, Figs. 23, 24

³ *Ibid.*, p. 250, Fig. 26, 4.

⁴ *Ibid.*, p. 246, Fig. 25, 13.

PLATE LIV



SCALE $\frac{1}{2}$

COARSE POTTERY OF THE FLAVIAN PERIOD
FROM CASTLEDYKES

at the core, the other of very fine pinkish clay with darker slip, similar to the fragments found in the third west ditch.

Three fragments came from a bowl of fine pink clay, slightly micaceous, with a broad flat rim showing a groove, like several of the Newstead bowls.¹ Four came from a bowl of extremely hard fine pinkish-buff clay with darker slip, burned slightly at the core. It had an overhanging mortarium-like rim, and was studded inside with tiny particles of grit, but seemed too fragile to have been used as a mortarium. Its side was ridged, and had the carination typical of first-century bowls. One fragment came from a bowl of hard red clay, slightly micaceous, with a rather uncommon rim, which can, however, be paralleled from Newstead.² (Plate LIV, 11-14)

23. Fragment of an olla or beaker of fine pink clay, with everted bead-rim and outcurving grooved shoulder. From outside north entrance. (Plate LIV, 15)

24. Two fragments of a thick-walled olla, of pink clay, with everted rim, hollowed on the top. From outside north entrance. (Plate LIV, 16)

25. Five fragments of a deep thin-walled bowl of very hard fine red clay, with grooved rim and side, of a type also found at Newstead.³ From outside north entrance. (Plate LIV, 17)

A Flavian date for the following, though less certain, was very probable:—

26. The narrow base of an olla or beaker of fine pink clay ($1\frac{3}{4}$ inches in diameter). From north berm ditch. (Plate LIV, 18)

27-31. Nine fragments found in trench AB outside the north entrance. They came from five different vessels. One was part of the body of a hard grey olla, with at least two girth-grooves. Four came from the lower part of a beaker of fine grey ware, slightly micaceous. The foot-stand was very narrow, not more than two inches in diameter, and finely modelled. Two came from a plain-sided platter of fine pink clay with pink slip. The remaining two were nondescript fragments of fine pink and buff clay, similar to the scraps found in the third west ditch.

¹ Curle, *op. cit.*, p. 250, Fig. 26, 3-5, and Pl. XLVIII, 1.

² *Ibid.*, p. 245, Fig. 23.

³ *Ibid.*, p. 250, Fig. 26.

The coarse pottery which was undoubtedly of Antonine date consisted of types which have become familiar on the Antonine Wall.¹ A representative selection of rim sections has been figured (Plate LV). The hundreds of fragments came from the following vessels: several amphorae, about a dozen red pitchers; over 30 mortaria; about a dozen jugs; almost 100 urns of red, white and grey clay; about 100 ollae and beakers of similar clay, besides 40-50 of fumed ware; some 20 bowls of white, red and grey clay, and about 40 of fumed ware; 3 red and white Castor-ware pots; a pot-lid of red clay, and there were at least 60 nondescript scraps of red and white ware.

Special mention need only be made of a mortarium of hard white clay, with overhanging rim, stamped as figured Plate LV, 1, of another mortarium of soft buff clay, showing traces of the common herring-bone pattern;² and of the pot-lid Plate LV, 30. The lid was of very fine hard red clay, grooved round the edge and on the top. Although found in the make-up of the *intervallum*-street on the north side, it was of such excellent workmanship that one was tempted to assign it to a Flavian date.

Only two coins were discovered, one outside the north ditches near the entrance, the other in the filling-in. The first was a *dupondius* or *as*, so hopelessly corroded as to be almost unidentifiable, but its appearance suggested that it was of Hadrian. The second was a *dupondius* of Hadrian fairly well worn:—

Obv. IMP CAESAR TRAIANVS [HADRIANVS AVG]

Bust laureate and draped right.

Rev. PONT MAX TR POT COS II FORT RED; S C

Fortuna seated left, holding rudder and cornucopiae.

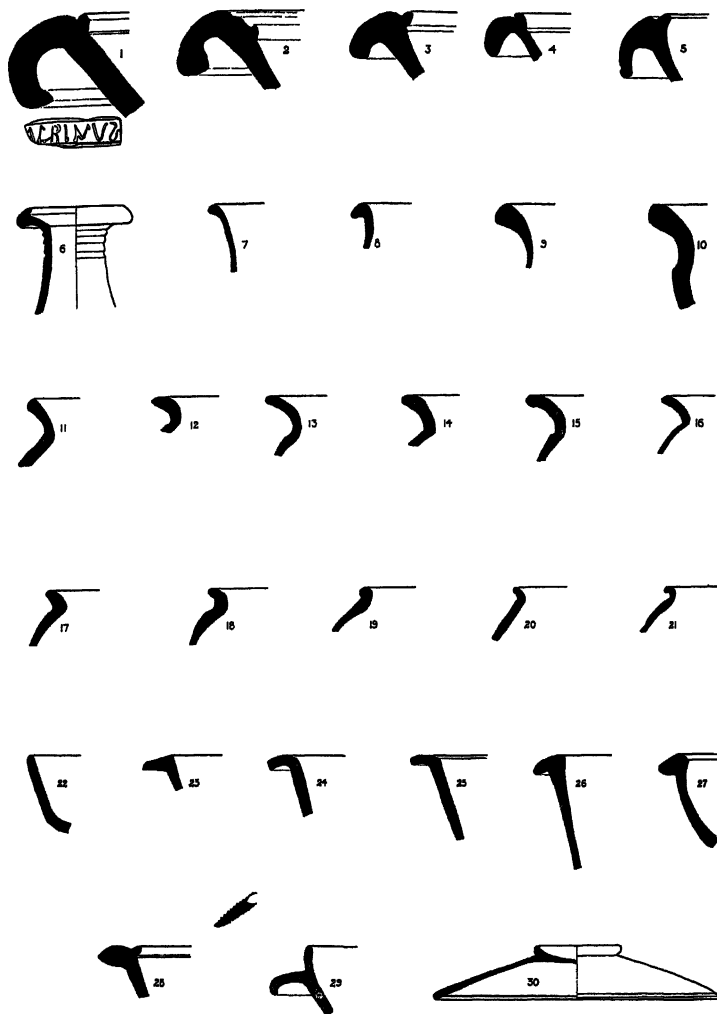
Cohen², ii, p. 170, No. 756. A.D. 118.

The second of these coins was certainly dropped in the Antonine occupation, the first probably so.

¹ See, for example, S. N. Miller, *The Roman Fort at Balmuildy* (1922), pp. 76 ff., and *The Roman Fort at Old Kilpatrick* (1928), pp. 41 ff.

² See, for example, S. N. Miller, *The Roman Fort at Balmuildy*, (1922), p. 78, and Pl. xi. B, Nos. 1-3.

PLATE LV



SCALE $\frac{1}{2}$

COARSE POTTERY OF THE ANTONINE PERIOD
FROM CASTLEDYKES

CONCLUSIONS

The most important result achieved by the excavations at Castledykes was the recovery of evidence for an occupation of the site in the Flavian period. In fact, the possibility that the Flavian trench EF on the north side had held a palisade suggested that there may have been two Flavian occupations, the first of a temporary character, the second permanent.¹ The existence of a temporary Flavian enclosure at Castledykes has, however, still to be proved.

The existence of a permanent Flavian fort, on the other hand, has been securely established by the discovery of the (Flavian) berm-ditch under the front of the Antonine rampart on the three sides examined. The Antonine fort must have been preceded by a Flavian fort, apparently about the same size as itself, that is, with an internal area of about 6½ acres. To the Flavian fort had belonged, besides the berm ditch, the third and fourth west ditches, the third north ditch, trench CD at the north entrance, and the sleeper trench under the first Antonine *intervallum*-street on the west side. The Flavian trenches AB and EF, though possibly belonging to an earlier structure than the permanent Flavian fort, may also have been in use during the occupation of that fort. A Flavian origin seemed extremely likely, too, for the first and second north ditches, and probably therefore for the first and second ditches on the east and west sides. So far as can be deduced from an examination of three sides, the ditch system of the Flavian fort was very similar to that of the Antonine fort.

A ditch system so elaborate must have been accompanied by a rampart of considerable dimensions. The rampart of the Flavian fort at Fendoch was 17-20 feet wide,² while the Flavian forts at Brecon³ and Caerhun⁴ were defended by clay banks 18 and 20 feet wide respectively. At Castledykes no certain traces of a Flavian rampart were identified *in situ*. Its apparent disappearance could only be accounted for by supposing that either it had been completely removed by the Antonine garrison, which did not seem likely, or else its material had been skilfully

¹ See above, page 156.

² *Proc. Soc. Ant. Scot.*, lxxiii (1938-39), p. 113.

³ R. E. M. Wheeler, *The Roman Fort at Brecon* (1926), p. 6.

⁴ *Archaeologia Cambrensis*, 1926, p. 284

THE FORTS

base the superstructure was of sods, carefully laid, while for the next 7 feet or so it was made up of earth and less well stratified sods, many of them peaty. These keyed into the turf cheek in front in such a way as to leave no doubt that they were of contemporary build. The front 12 feet of rampart was therefore all later than the berm ditch over which the stone base projected.

The remaining 18 feet or so of the rampart was of much more heterogeneous composition, the bulk of it consisting of un laminated turf, with streaks of clay, peat, sand and gravel. Much of this material, especially the un laminated turf, presented the appearance of having been reused. It may possibly represent the remains of an earlier rampart which may be associated with the berm ditch. However that may be, the manner in which the rear portion seemed to lean forward on the front suggested that the 30-foot rampart had been erected by setting up a carefully constructed 12-foot front and then laying mixed, possibly reused, material behind it to a breadth of 18 feet.

In one section,¹ the front of the rampart was found to be of a different character from that described. The outermost 4 feet lay partly on the sandy brown earth filling the berm ditch, and partly on the natural sand behind. The next $9\frac{1}{2}$ feet stood on a base of cobbles, of which there was a double layer at the outer edge. To provide a level floor for this base, the top soil had been removed, and the natural sand stepped down at the inner margin of the base to a depth of about a foot.

Over, and in front of, the double layer of cobbles, the superstructure was mainly of clay and earth; over the rest of the cobble base it was of peat and earth. It was all, however, so keyed together as to be clearly of contemporary build. Moreover, in this as in other sections, the rear portion of the rampart appeared to have been built up against the front, so that the difference in material and foundation of the latter at this point did not seem to have been due to a refacing. No satisfactory reason for this difference suggested itself.

In the same section a piece of a box flue-tile and three amphorae fragments were discovered in the upper layer of cobbles at the outer edge of the rampart base. Not only did these finds help to establish the

¹ See Section through East Rampart (Trench 1, Pl. XLIV). Trees made it impossible to continue the trench right through the rampart.

held a palisade, presumably for the reinforcement of the Flavian rampart, or had been a drainage ditch, or had simply been the innermost ditch of the Flavian ditch-system.

The position of the Flavian east entrance was uncertain, but the west gateway must have occupied approximately the same position as its Antonine counterpart. The site of the Flavian north entrance, on the other hand, had differed slightly from the sites of the two successive gateways of the Antonine period. The level ground outside the east half of the north front of the Flavian fort may have been occupied by an enclosure extending along that front from an annexe on the east side.

The interior of the Flavian fort must have been occupied by timber buildings, with one of which the sleeper trench under the west *intervallum*-street of the first Antonine occupation had doubtless been connected. It was noteworthy, however, that a flue tile was found in the heap of cobbles below the east rampart (Trench 1, Plate XLIV). From its position it should belong to the Flavian occupation. It suggested the existence during that occupation of at least one stone building, probably a bath-house.

The Flavian fort at Castledykes had, then, been of considerable importance. Its size, the strength of its defences, and the possible existence of stone buildings and of an annexe, all showed that the occupation of the fort had been intended to last for some time. The part played by the fort in the Agricola scheme is thus comparable, not with that of the temporary posts on the Forth-Clyde isthmus,¹ but with that played by the permanent forts at Ardoch, Camelton and Newstead.² The construction of such a fort at Castledykes would be intended to ensure control of an area upon which a number of lines of communication converged.

At the beginning of the Antonine period a new rampart was built, partly overlying the berm ditch, which was now filled in. The rampart was about 30 feet wide, and had a well-defined turf cheek, 5-6 feet wide, which rested on a continuous stone base. The main body of the rampart had been laid on the natural subsoil and was of mixed composition. It

¹ Macdonald, *The Roman Wall in Scotland* (1934), pp. 466 ff.

² *Journ. of Roman Studies*, ix (1929), pp. 113 ff.

may possibly have contained reused material from the Flavian rampart. The Antonine rampart at Castledykes was almost as massive as were the ramparts of Ardoch¹ and Camelon,² which, as they stood when excavated, were 30-40 and 41 feet wide respectively. A continuous stone base was also present under the front of the Ardoch rampart and under both front and rear of the Camelon rampart.

At the beginning of the Antonine period, too, the Flavian ditch-system was remodelled. The third west ditch and the *clavicula*-like ending of the fourth west ditch were filled in. The fourth west ditch itself, however, was retained and given a straight finish, and the third north ditch also remained in use. If the first and second ditches were of Flavian origin, they too were reused after being cleaned out and probably widened and deepened. A new north entrance was laid out in a slightly different position from that of its Flavian predecessor, and the ditch-plan outside it was probably altered at the same time. The narrow Flavian trenches, AB, CD, and EF, had by this time been disused, and an outlying ditch now marked off an enclosure on the east half of the north front, which may have communicated with an annexe on the east side of the fort.

A number of remains within the fort were assignable to the first Antonine occupation. These were the pits behind the north and west ramparts, and the clay and wood structures behind the east and west ramparts. Evidences of burning found in connection with these structures and with a contemporary guardhouse at the north entrance may indicate that the first occupation had ended in a conflagration. It had certainly ended with serious damage to the north gateway and, probably, to the rampart.

Later in the Antonine period, a reconstruction was carried out, after an interval of abandonment. Debris was levelled out and new roads and *intervallum*-streets were laid down. These last now gave readier access to the rampart at many points. It is probably to this second occupation that the combination of the two east ditches into one at the east entrance should be assigned. The north gateway was much reduced in frontage, apparently in anticipation of disturbed conditions.

¹ *Proc. Soc. Ant. Scot.*, xxxii (1897-98), p. 413

² *Proc. Soc. Ant. Scot.*, xxxv (1900-1), p. 351 ff

BOTHWELLHAUGH

By J.-M. DAVIDSON

The fort is situated at the western end of the parish of Dalziel, in Lanarkshire, $1\frac{1}{4}$ miles north-west of the town of Motherwell and $1\frac{1}{2}$ miles north of Hamilton. It occupies an elevated position about 500 yards north of the confluence of the South Calder Water and the river Clyde.

Tradition has long associated a Roman occupation with a nearby site and the single-span, high-arched, stone bridge over the South Calder Water, which it overlooks. It is true that General Roy makes no mention of Roman remains here, though he was born in the parish of Carluke, less than ten miles distant, and must have known the district. The *Statistical Account of Scotland* (1793),¹ however, under the heading 'Antiquities in the Dalziel Parish', in giving a description of the great Roman highway commonly called 'Watling Street', which went along the summit of the parish from east to west, notes that: 'Along this ancient road, at the western boundary of the parish, upon a steep bank over the river Calder is the remains of a praetorium or Roman encampment. Little more than 20 years ago it was pretty entire, but cultivation has now greatly encroached upon it.' By Stuart's time every vestige of it had gone.² The reason for its disappearance is given by the *New Statistical Account* (1862),³ which records that 'enquiries regarding the camp were made from an old man in his 94th year, who, all his life, until he was disabled, had been in the service of the proprietor, and who recollected the camp distinctly, having assisted in its demolition.'

The demolition of the fort was followed by the rejection of the eighteenth-century record of its existence. In 1894, examining the portable relics which had been found in the locality, Dr. James Macdonald⁴

¹ Vol. III, p. 458.

² *Caled. Rom.*, 2nd ed. (1852), p. 239

³ Vol. VI, p. 452.

⁴ 'Note on the "Roman" Bridge near Bothwell,' *Trans. Glasgow Arch. Socy.*, vol. II, pt. III.

concluded: 'After a careful search I have been unable to light on a single relic of this class that can be advanced as proving a Roman occupation of that part of the country'; and with regard to the site at Bothwellhaugh he adds: 'This enclosure, whatever it was, no longer exists... It is impossible to accept as well founded the opinions so freely uttered last century, by which enclosures of almost every shape and size were set down as "Roman Camps." If they are accepted, any effort to place the study of our Roman military antiquities on a sure foundation may be given up as hopeless.' No evidence was adduced thereafter to shake Dr. Macdonald's negative conclusion, subsequent writers¹ making no mention of a Roman occupation of the site.

There is one circumstance which may have discouraged a close examination of the site during the nineteenth century and the early years of the present century. For some time prior to the last European War the ground occupied by the fort was covered with trees. During the years 1914-16 the site was cleared. A scrutiny of the tree stumps seems to point to an average tree-life of some 70-80 years. Many stumps, however, are in a state of extreme decay, and as these are of relatively equal size, they would indicate an earlier planting, probably about the beginning of the nineteenth century. The presence of woodland, therefore, while assisting in the preservation of the remains, may have partly obscured their existence.

In point of fact, however, their re-discovery was not due to the denudation of the site. The north-east rampart, coinciding with the line of hedge bordering a roadway, provided the clue from which subsequent confirmation of Roman occupation was obtained. This rampart is not now, and apparently never has been, concealed by trees. The change in formation of the bank underlying the boundary-hedge at the north corner of the fort is apparent to the east of the roadway in meadow-land of Orbiston estate, and the rampart formation becomes more pronounced every yard towards the east corner, before which the road intersects it. The rounded corner connecting the north-east and south-east ramparts is so well defined and so close to the adjoining roadway that it could

¹ John H. Pagan, *The Antiquities of Bothwell* (1892); Geo Henderson and J. Jeffrey Waddell, *By Bothwell Banks* (1904); Geo. T. Sneddon and Alex. A. Stevenson, *Old Motherwell* (1926)

hardly have been concealed under any circumstances of woodland growth.

THE SITE

The haugh-lands on each side of the Clyde at Bothwell at its meeting with the South Calder are low and swampy. This condition has been greatly aggravated by the hand of man, in that the neighbouring lands are much undermined by mineral workings. Periodically these cause surface rifts and subsidences, succeeded by floodings of the sunken areas. About 500 yards north of the present bed of the Clyde the ground slopes sharply upwards, and on a bank some 100 feet above the haugh-lands, and within a loop of the South Calder Water, the fort is situated (Plate LVII). Its position is, therefore, comparatively commanding, being naturally defended by steep slopes on the north-west and south-west sides. On the north-east side the flat high-ground is continued outside the bounds of the fort a further 100 yards, beyond which there is an abrupt slope down to the Calder Water. The most vulnerable side of the fort would be to the south-east. It is there that the rampart is still most pronounced and in the most perfect preservation.

The outlook to the south-east and south-west is extensive, commanding a wide view over the Clyde valley to Tinto in the south, with the ancient settlements around Hamilton and Cadzow in the foreground, and to the heights of Dechmont and Cathkin to the south-west. To east and west the view is now greatly obstructed by vast heaps of refuse from neighbouring coal-mines.

The South Calder Water runs round the north-east and north-west ramparts at about 100 yards distance, while the Clyde itself is approximately parallel to the south-west side of the fort.

Owing to the nature of the surrounding ground, access to the site is much restricted. One way of approach is by a narrow roadway, designated 'Watling Street (Roman Road)' on the Ordnance Survey Map,¹ which issues from the Motherwell-Bellshill road near North Motherwell farm and proceeds west and south by short straight stretches towards the fort at Bothwellhaugh, intersecting the north-east rampart about 50 feet from

¹ 1-inch Ordnance Map, sheet 73 (1932).



SITE OF BOTHWELLHAUGH FORT, LOOKING NORTH-EAST

PLATE LVIII



SITE OF BOTHWELLHAUGH FORT, LOOKING SOUTH-EAST

the east corner (Plate LVIII) and crossing the Calder Water by a modern iron bridge within a few yards of the medieval stone bridge there.

THE SURFACE REMAINS

Practically the whole of the line of the ramparts is visible on the surface. Measured between the inner margins of the existing mounds the dimensions of the enclosure are about 420 feet by 395 feet, giving an area of rather over $3\frac{1}{2}$ acres. The diagonally opposite corners correspond approximately with the cardinal points of the compass (see Plan, Plate LXII).

The best preserved rampart is that facing the south-east, where the mound is well defined from corner to corner. The spread of the rampart is extensive, ranging from 50 feet to 60 feet in width. The maximum height is about 5 feet. Almost exactly in the centre of this south-east side a marked dip in the contour of the rampart can be discerned, suggesting the presence at that point of a gateway. Beyond the outward spread of the rampart the ground is comparatively level and there is no evidence of ditches on the surface, although this side of the fort appears to have been the most open to attack and would apparently require the most complete artificial defence. The rounded corners are very pronounced, the medial radii being about 40 feet.

About 50 feet from the mid-point of the south-east side the rampart is intersected by a 10-foot track, which runs through the fort parallel to the south-west rampart. This is probably of recent origin, and may be related to the afforestation or deforestation of the site.

The whole straight line of the south-east rampart with its central depression is strikingly impressive when viewed from some little distance to the east. The outward slope at the south corner is so well marked as to arrest instant attention.

The south-west rampart is more irregular in form, though well-defined. The slope to the haugh-lands below is steep. No ditches are visible. The west corner is much defaced, owing, apparently, partly to subsidence and partly to disturbance through the removal of timber.

The north-west rampart for about one-third of its length is entirely obliterated. The cutting of the track referred to and the natural flow of surface water to the Calder below, as evidenced by many channels worn

deep into the surface, explain this. Apparently, also, this part of the site was utilised as an assembly point for the withdrawal of timber preparatory to its being launched down the steep incline to the stream. Some 40-50 yards from the west corner, however, the rampart is picked up again, and from this point to the north corner there is some indication of the presence of at least one ditch in the colouring of the grass outside the rampart as well as in the contour of the ground. The rampart and the ditch can both be seen comparatively clearly in the rise and fall of the fence on one side and of the hedge on the other side of 'Watling Street', which, as has been explained, cuts across the north corner of the fort.

The north-east rampart forms the western boundary of the Orbiston estate. From a small mound below the hedge, suggestive of an accumulation of road-side upcast, the rampart swells out to a considerable spread until, at the point of intersection of the roadway, it is impressive in its height and width (Plate LIX, A), while after crossing the roadway and onwards to the east corner, it is as pronounced in its formation as the adjacent rampart along the south-east side. In the centre of the north-east rampart, as of the south-east rampart, there is clearly to be seen a fall on the contour line indicative of a gateway (Plate LIX, B).

The interior of the fort is much furrowed by trenches cut for cultivation or for drainage purposes. Towards the south corner there appear to be some surface indications of underlying foundations, and at one point some loose stonework is visible.

The superficial examination appeared to be sufficiently encouraging to justify an exploratory cut in an endeavour to prove the Roman origin of the remains¹

SECTION A-B

A single cut was made transversely through the south-east rampart about midway between the east corner and the hollow representing the sup-

¹ Thanks are due to the Town Council of the Burgh of Motherwell and Wishaw for readily granting permission to excavate the site and for enclosing it within a stout wire fence, thereby ensuring its preservation, and to Mr John S. Sherdan for granting access to that part of Logan's Plantation while he was tenant of the Town Council. The Trustees of the Orbiston Estate also, and their tenant, Mr. James Forsyth, readily agreed to allow such work as was necessary on the portion of the fort falling within the boundaries of their lands.



A NORTH-EAST RAMPART, BOTHWELLHAUGH



posed gateway (Plate LXII). The point was not that at which the rampart was most perfect, either in its height or in the state of its preservation, but was chosen partly because of its apparent freedom from tree-roots, and partly to avoid such possible complication of ditches as might arise in close proximity to a corner or gateway, in order that as representative a section of the defences might be obtained as the ground would permit.

On the level ground behind the rampart slope, a hard pebbly surface was encountered below the turf, suggestive of a much-trodden pathway. It had not the substantial character of a metalled roadway. It ran parallel to the line of the rampart, extending 10 feet inwards from the tail of the existing mound. As this, as we shall see, lay 12 feet inside the inner face of the rampart proper, the *intervallum*-track, as it appeared to be, would have an original breadth of 22 feet.

RAMPART (Plate LXI). The rampart superstructure still standing to a maximum height of about 5 feet, consisted of a mottled yellow and grey clay, friable in its upper part, as though mixed with a proportion of sand or grit. It was quite dry until about three feet down from the top, when it became slightly plastic, and there were observed small pockets of stiff grey clay. About $4\frac{1}{2}$ feet below the surface, the texture changed to a sticky layer of clay in grey and yellow bands, and 6 inches lower down the foundation was encountered underlying a stratum of uniformly grey and very plastic clay.

The foundation took the form of two bands of stonework at the outer and inner margins of the rampart. At the outer margin it consisted of flat sandstone slabs of about 4 inches in thickness, and from the outer edge it extended inwards for $5\frac{1}{2}$ feet. For a further 3 feet inwards there was found a layer of small pebbles forming a gravel base. The clay layer sealing this was so adhesive that it was extremely difficult to expose the gravel without lifting the whole along with the clay. From this point to the inner band of stonework the superstructure was laid direct on the natural clay, and here after a few hours water began to collect.

The inner foundation was constructed of flat stones similar to those used for the outer band, but it extended only to a width of 3 feet. The surface of this inner base was 12 inches lower than that of the outer band. It may here be noted, however, that the surface of the ground bears indications of subsidence, due to the presence of coal workings under-

ground, and a slip may have altered the level of the rampart base from front to back

Measured over the bands of stonework the rampart was $23\frac{1}{2}$ feet broad. Its inner face was well defined. above the edge of the stone foundation it showed a well-marked batter of 1 in 4, which extended uniformly upwards for 4 feet, though this degree of steepness is unlikely to have been maintained much further. The outer face was quite indiscernible, and the nature of the rampart material was uniform in composition as far beyond the stone base as 15 feet. In the body of the rampart and in the material spread beyond it there was noted a red rust-like band, which, from the level of the stone base, rose in the interior of the rampart to a height of 4 feet in the centre. 2 feet above the inner edge of the outer stonework there was observed a thin line of black vegetable matter extending inwards about 3 feet over the gravel, without material change in level. 2 feet 3 inches above the outer edge of the stonework was a similar black layer, extending 5 feet outwards from the rampart but in this case sloping downwards about 6 inches. In the rampart-spread beyond the outer stonework were found two mortarium rim-fragments, apparently of the same vessel.

DITCH-SYSTEM. Beyond the outer stonework of the rampart foundation the surface was of a grey, gritty material, which sloped slightly upwards from just below the flagstones. About 12 inches below this layer a brown boulder-clay was found. This boulder-clay gave place to a tough, purply clay at a distance of 15 feet from the rampart foundation—a natural position for a ditch—and extended outwards for a width of 15 feet—a suitable width for a ditch. At the same time, this purply clay was found elsewhere on the site as a natural formation. We are thus confronted with the alternatives, either that no ditch was dug here or that it was filled in with material excavated from the immediate neighbourhood. As we shall see, subsequent excavation on this and other sides of the fort furnished no definite evidence of a ditch in this position.

After an interval of $3\frac{1}{2}$ feet, that is, at $33\frac{1}{2}$ feet from the rampart foundation, there came a ditch with well-defined margins giving a width of 17 feet. The sides sloped down for about 2 feet 9 inches to a drainage channel about 2 feet 6 inches wide and a further 12 inches deep. At the foot of this drainage channel a sandy bottom was encountered, reinforced

by some stone cobbling. The material in the ditch was dark grey in colour, gritty in appearance and to the touch, and friable when dry. It presented the appearance of a rain-washed, sedimentary in-filling. No relics were found in it.

RAMP. From the tail of the inner slope of the rampart a rough stone pavement was found rising with the slope for a distance of 12 feet. This was of substantial construction, rudely fashioned but fairly symmetrically laid. At the foot of the incline, at the point where it merged with the *intervallum* trackway, the stones bore evident signs of blackening by fire. Built into the pavement were found several fragments of flat, red tiles, about $1\frac{1}{2}$ inches in thickness

OVEN. The material underlying the ramp was examined and the fire-blackened stones, as well as considerable quantities of burnt refuse, were removed. Immediately behind the inner stonework of the rampart foundation was found a structure built with large boulders, solidly constructed, and in its make-up were found many pieces of red tiling. So far as it was revealed within the width of the trench, the structure, together with the immense quantities of carbonized debris encountered, suggested the presence of an oven.

Subsequently, the structure was opened up and its character as an oven confirmed (Plate LX) It proved to be a circular stone structure with a hollow centre, having an internal diameter of 4 feet, and a stone wall about a foot high and a foot in thickness, this giving an external diameter of 6 feet. The bottom of the structure consisted of flat stones laid about a foot above the level of a feed-hole opening from behind. The stonework was heavily burned, and from the ashes and debris were recovered many pottery fragments.

TWO STRUCTURAL PERIODS. The stonework of the oven was covered with a considerable quantity of burnt red clay, underlying a layer of black matter, over which were layers of white and yellow clays. Then came a deposit of forced surface material, with more black matter, in which were numerous potsherds as well as many fragments of flat, red tiles. On this was laid the rude paving of stones and tiles described above.

The burnt clay and the blackened material immediately overlying it can be explained as debris from the floor and superstructure of the oven proper, and the red and yellow clays above would be laid to seal up the disused structure as a preliminary to the addition of the ramp. The surface material, with black matter obtained from the immediate vicinity of the oven, would then be laid on to give the ramp a uniform upward slope.

The evidence thus indicated two structural periods. To begin with, the inner face of the rampart had coincided with the back of the inner band of the stone base, and immediately behind it an oven had been built. Subsequently, the oven was disused and sealed over with clay, and was buried in an extension added to the back of the rampart in the form of a ramp, which increased the rampart width at that point by some 12 feet from $23\frac{1}{2}$ feet to about $35\frac{1}{2}$ feet.

The amount of black matter found in and around the oven showed that this structure had been in use for some time, and therefore proved that an interval of some duration had elapsed between the original construction of the rampart and the addition of an extension largely made up, as has been explained, of structural debris in the form of broken tiles. The significance of this for the history of the fort is considered below (p. 187).

SUPPLEMENTARY TRENCHES

The Roman origin of the enclosure having been established beyond doubt, opportunity was subsequently taken to do some further exploration. In the late summer of 1939 some trenches were cut across the ramparts and ditches to discover more fully, if possible, the nature and scope of the defences. The short time available, however, before the outbreak of war proved insufficient to enable the complete lay-out to be ascertained.

The determination of the ditch-system presented many difficulties. The fort is situated on boulder clay of heavy and tenacious character, as well as of great diversity of structure. The penetration of massive tree-roots from above and movement from below due to underground workings have caused changes in stratification, and there was a continuous infiltration of water, the cutting of a trench or the sinking of a pit being followed by an immediate percolation, which ceased only on the water attaining the grass level. These circumstances all tended to make



OVEN BEHIND SOUTH-EAST RAMPART, BOTHWELLHAUGH

excavation difficult, slow, and inconclusive. The results, accordingly, are to be regarded as tentative and subject to confirmation by further excavation after a period of dry weather when the ground would be likely to be less water-logged. In the meantime only such results as were definitely established have been embodied in the description and plan of the defensive system, and much that caused great loss of time and considerable speculation has been omitted and held over for the present.

A partial cut through the south-east defences south of the gateway was primarily intended to locate the ditch-system, but was carried far enough back to disclose the outer stonework of the rampart foundation in the same relative position as in Section A-B and to show that the superstructure here was of similar composition. Two ditches were definitely located, the lip of the inner being no less than 36 feet from the outer stonework of the rampart foundation. The interval between the ditches was about 7 feet. Both were about 15 feet wide and comparatively shallow at 4 feet. Their terminals were traced on both sides of the gateway, and were found to be separated by a distance of 25 feet. South of the gateway the end of the inner ditch had at its bottom massive timbers, apparently fallen in from a collapsed gate-structure. Numerous pottery sherds were recovered from the ditch-ends.

On the south-west side the rampart-base proved to be practically of the same over-all width as on the south-east, but owing to the slope here it was twice stepped down, the difference of level from back to front being no less than 3 feet (Plate LXI). At the inside edge of the base there was a stone step, $1\frac{1}{2}$ feet wide, 1 foot above a flagged pavement 2 feet 9 inches wide. This lower level extended outwards another $7\frac{1}{2}$ feet, of which the inner 4 feet had a clay bottom and the remaining $3\frac{1}{2}$ feet a cobbled surface. Then came a further drop of 2 feet, with a cobble-stone step, 1 foot wide and 1 foot deep, connecting the two levels. From the step outwards the lowest (outermost) level showed successively a gravel spread for 3 feet 3 inches, natural clay for 5 feet 6 inches, and finally a heavy sandstone flagged pavement 5 feet wide, the whole foundation thus having an over-all width of 25 feet 6 inches. The single ditch located was about 22 feet from the outer stonework. It proved to be only 5 feet wide, but in view of the rapid fall of the ground here this was not surprising. From this ditch came three scraps of pale-blue bottle-glass.

On the north-west side of the fort the rampart and ditch-system presented more than usual difficulty, the former, as already indicated, having been much defaced, even the stone foundation being greatly displaced and wrecked. Towards the north end, however, a well-defined ditch, 13 feet wide, was traced, the edge of which was 32 feet from the outer stonework of the rampart-base. It contained several fragments of Samian ware. This ditch terminated unexpectedly at a point nearer the north corner than the corresponding gateway in the opposite side. The opening, moreover, appeared to have been narrow, the ditch-ends giving a width of only 12 feet.

The ditches on the north-east side, while not apparent from surface indications, were picked up by survey levels, and were found to be in the same position, relatively to the rampart-base, as those on the north-west side. The ground in which this part of the fort lies belongs to a different proprietor, and permission was not sought at this time to excavate there.

THE INTERIOR

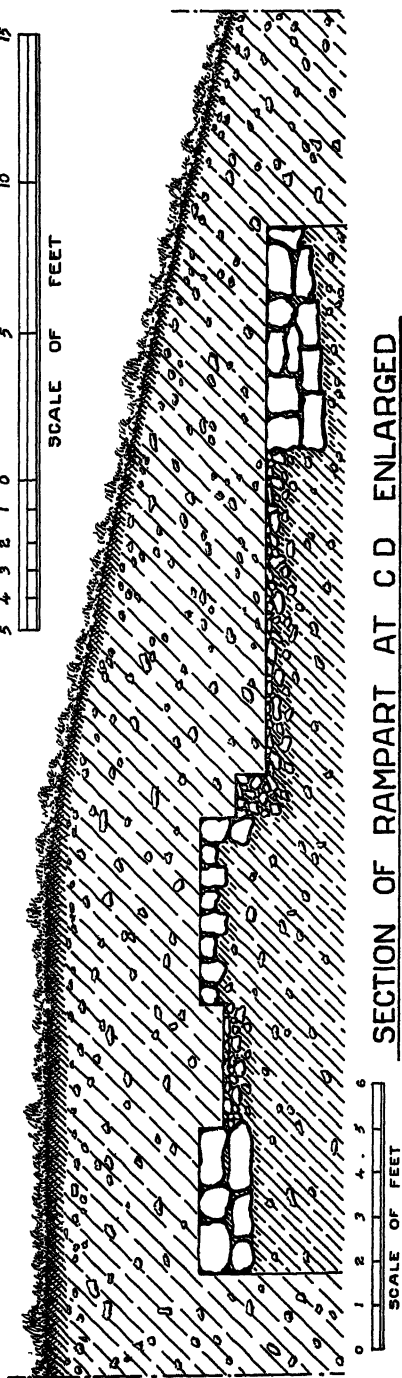
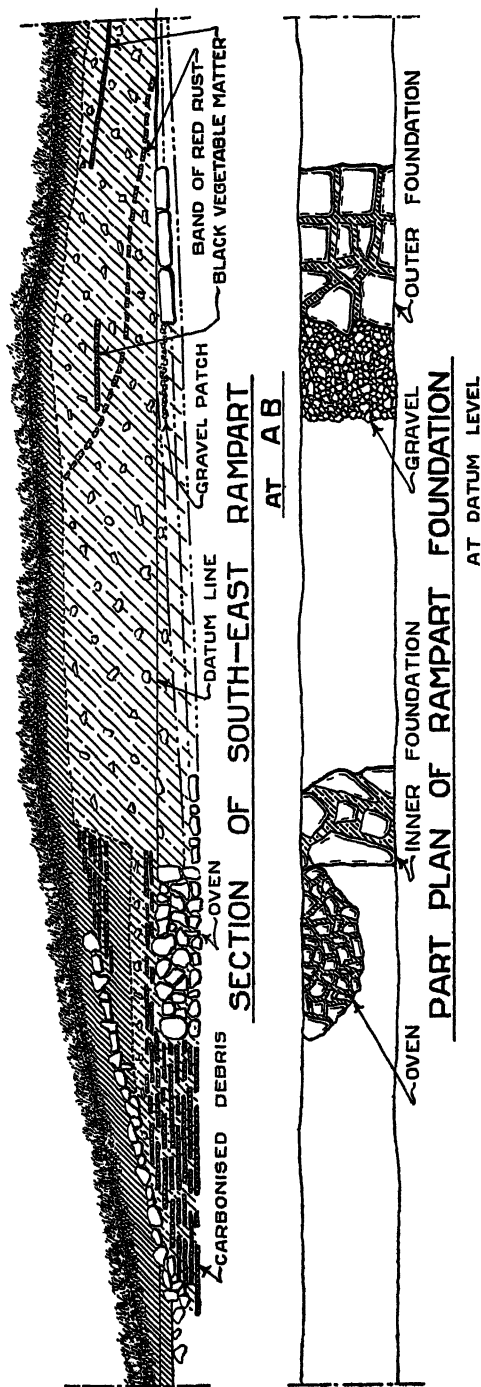
A long trench was cut diagonally across the central area of the fort in the hope of picking up traces of buildings. Except for some pottery sherds singularly little was revealed as a result of this: there was an occasional patch of cobbles, but no certain foundations.

THE FINDS¹

FROM THE EXCAVATIONS OF 1938 AND 1939. The objects of stone comprise one slingstone ($1\frac{3}{4}$ in. in diameter), probably of local sandstone, and a few pieces of shale. Metal is represented by a hopelessly corroded scrap of bronze, a small piece of iron of uncertain use, and a fragment of lead. The lead was assayed by Dr. Smythe of King's College, Newcastle-upon-Tyne, and proved to contain very little silver and no tin. It appeared to Dr. Smythe to have come from a dowel or cramp, although it was impossible to be certain of this.

There are two scraps of glass from a cylindrical blue-green bottle, and several lumps of clay and pieces of tile found at various points on the site. The clay probably came from wattle-and-daub huts, and the tiles

¹ I am indebted to Miss Robertson for the description of the finds.



SECTIONS OF SOUTH-EAST AND SOUTH-WEST RAMPARTS, BOTHWELLHAUGH

include one piece ($1\frac{1}{2}$ in. thick) from a hypocaust, one wall-tile scored with a 'key' to hold plaster, and another of uncertain use, heavily soot-blackened.

The bulk of the finds is made up of potsherds, a few Samian, but the majority of coarse ware. All are fragmentary and have suffered badly from the corrosive action of the soil. The Samian fragments are, without exception, of Antonine date, the vessels represented being four cups (form 33), three platters (one of form 18/31 and two of form 31), three bowls (form 37) showing worn traces of panel decoration, one of which has been mended with lead rivets, and three nondescript scraps. Two of the cups have the following potters' marks stamped on the inside bottom:

CASSIVS F The potter Cassius is said by Oswald¹ to have worked at Heiligenberg during the Domitian-Antonine period. Cups of form 33 with this stamp have been found in Britain at London, Wroxeter and York, and a platter of form 31 with the same stamp occurred at Newstead.

CROBISO M Crobiso is assigned by Oswald¹ to the Trajan-Antonine period at Lezoux. The stamp has been found on cups of form 33 at Etaples and on platters of forms 18/31 and 31 at Chester and York.

The potsherds of coarse ware are also of Antonine date, and all without exception of types commonly found on the Antonine Wall.² They include fragments from about a dozen amphorae and from nine or ten red and white mortaria with hooked-over rims.³ One of these, of hard white clay, studded with black grit, has a rim similar to *Balmuldy* Pl. xli, 19. It bears the stamp RBIV2. A more complete example of this stamp—RBIV2 II—has been found at Corbridge.⁴

There are also fragments of over two dozen red and of two grey urns, among them three rims of red wide-mouthed vessels resembling *Balmuldy*, Pl. XLIV, 1. Ollae or cooking-pots are represented by sherds of seven vessels of grey clay and a dozen of fumed ware. The rims are of the general types *Balmuldy*, Pl. XLV, 7-9, 13-16, and 28. A few scraps of fine red and brown ware probably came from small ollae or beakers.

¹ Felix Oswald, *Index of Potters' Stamps on Samian Ware*, s.v.

² For examples see Miller, *The Roman Fort at Balmuldy*, pp. 76 ff. and Pls. xxxviii ff., and *The Roman Fort at Old Kilpatrick*, pp. 41 ff. and Pls. xix ff.

³ Cf. *Balmuldy*, Pl. xli, 13 ff.

⁴ Unpublished. Information from Mr. E. B. Birley.

The bowl fragments belong to one vessel of red and one of grey clay, and to seven of fumed ware, all with a flat or roll rim, like *Balmuildy*, Pl. XLVII, 3-12. There is also part of a small red unguent pot, which, when intact, must have resembled *Balmuildy*, Pl. XXXVIII, 9.

FINDS SUBSEQUENT TO THE EXCAVATIONS OF 1938-9.¹ These include two slingstones (1-2 in. in diameter), a gaming disk (·9 in. by ·6 in.), two pieces of worked stone of uncertain use, and two of shale; one fragment of carbonized and several scraps of charred wood; ten pieces of iron strapping (2½-3 in. broad), probably parts of door mountings; two fragments of glass, one from a blue-green, the other from a dark-green bottle, several lumps of daub, four showing marks of wattle; eleven fragments of bricks (1½-1¾ in. thick), two of a semi-cylindrical roof-tile (*imbrex*), and five of wall-tiles.

In this additional collection there are over one hundred and ten potsherds, very fragmentary and all of Antonine date and of types similar to those already described. The Samian ware comprises fragments from three platters (form 18/31), five decorated bowls (form 37), and, probably, from four plain bowls. Amphorae are represented by twenty-six pieces, and mortaria by six white and five red fragments. Four of the white fragments belong to the same mortarium, a vessel with hooked-over rim stamped twice LR.² There are sherds from twelve different red and four grey urns, from ten red and nine grey ollae, and from nine fumed-ware ollae. Two of the grey ollae have had rims similar to *Balmuildy*, Pl. XLV, 3 and 13, while that of one of the fumed ollae resembles *Balmuildy* Pl. XLV, 2. There is one beaker fragment: it is from a Castor-ware vessel of white clay with black slip showing traces of decoration *en barbotine*. Of bowls there are one red and nine fumed-ware fragments, the rims being of the flat or roll type like *Balmuildy*, Pl. XLVII, 3-12.

¹ After the commencement of the war the site was in military occupation, and the detachment encamped there carried out some minor excavation-work for drainage and sanitary purposes as well as for building operations. Permission was given by the Officer Commanding the unit concerned to supervise this work in so far as it had a bearing on the Roman occupation of the site, and this cordial co-operation is gratefully acknowledged. To this circumstance, it will be seen, is due the recovery of a considerable number of pottery fragments.

² This appears to be the same as a stamp found at *Balmuildy* (op. cit., p. 78, and Pl. xl, 8) and in a kiln at Lincoln (*J R S*, xxxiii, p. 73, Fig. 13, 6).

One of the flat-rimmed fumed bowls has had a handle, a rather uncommon adjunct to such a vessel. Finally, there must be noted the base of a red unguent-pot similar to *Balmuldy*, Pl. xxxviii, 9, and the bottom of a tazza cup of red clay with thick grey slip. Sole relic of a time more recent than the Roman period is a tall thin vase ($9\frac{1}{2}$ in. high) of fine flower-pot ware.

CONCLUSIONS

The Roman fort at Bothwellhaugh is the first known station south of the Antonine Wall on the Clydesdale route connecting the Limes with the fort at Corbiehall (Castledykes). It is situated almost midway between that fort and the Limes fort of Balmuldy, being $14\frac{1}{2}$ miles distant from Balmuldy and $15\frac{1}{2}$ miles from Corbiehall.

The fort is placed where the Clyde valley is opening out from the Southern Uplands at the point where the river receives the tributaries of the South Calder Water from the east and the Avon from the south and west. The course of the Clyde changes here from NW. to WNW., the valley widening out to the basin bordered by the Campsie Fells and the Kilpatrick Hills on the north and by the Renfrewshire uplands and the Cathkins on the south. It is thus situated at a point of some strategic importance, guarding the pass which leads from upper to lower Clydesdale.

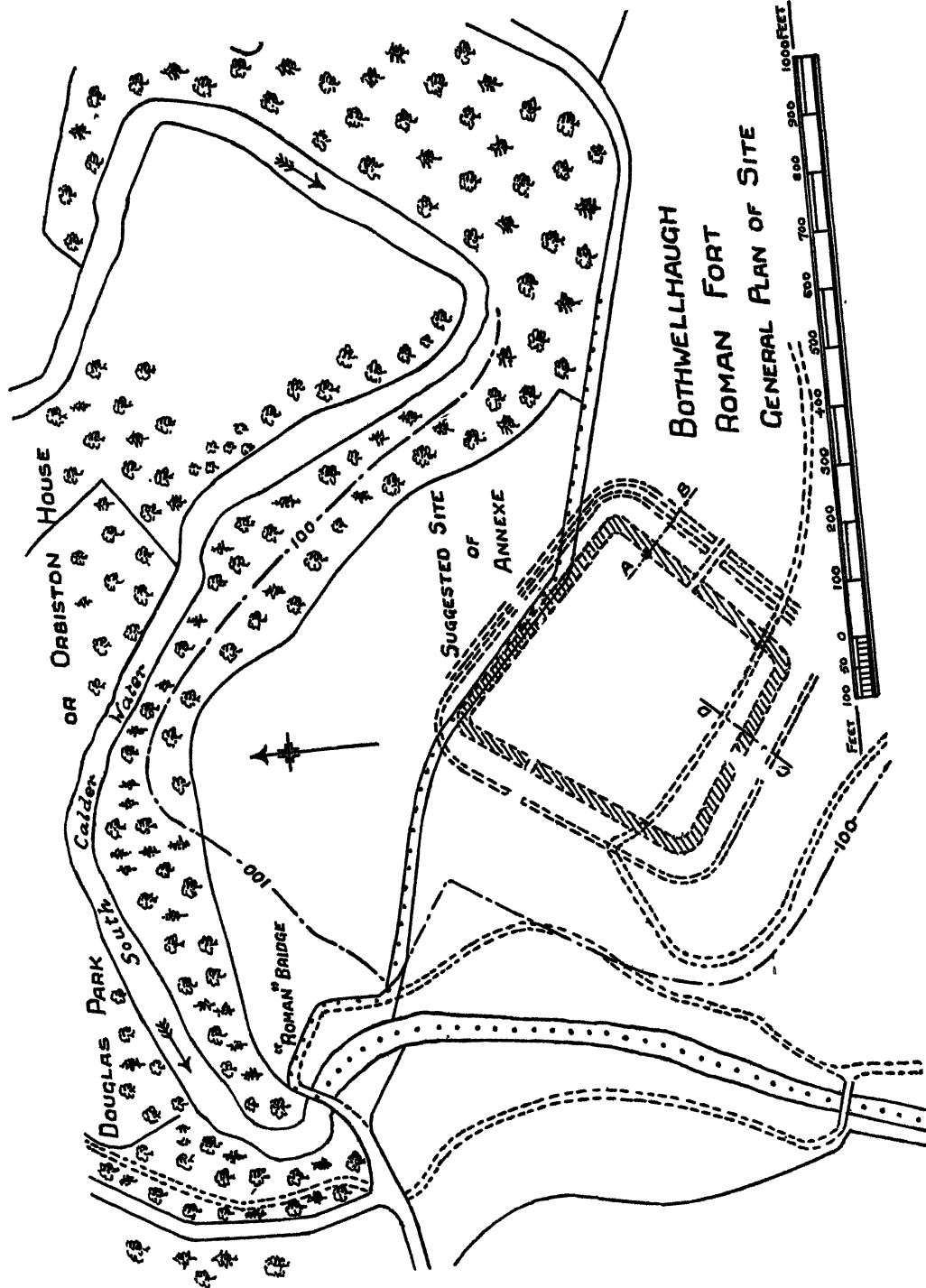
The roadway which crosses the north-east rampart and cuts off the adjacent part of the fort is known locally, it has been explained, as 'Watling Street', but this cannot represent the actual course of the Roman road when the fort was occupied. It may have followed the line of the present pathway on the left bank of the Calder. At right angles to this pathway there is some indication of a roadway running south-west and connecting, apparently, with the fort at the north-west gateway.

The presence of an annexe on this side, between the north-east rampart and the South Calder stream, seems probable not only from a superficial examination of the ground but also from the discovery of numerous fragments of tiles such as were commonly used in the construction of hypocausts. It is true that these fragments were found within the fort, most of them in the make-up of the ramp inside the south-east rampart, but it seemed clear that they were debris removed from a building, probably a bathhouse; and a bathhouse would lie normally in an annexe outside the fort.

The importance attached to the site is reflected in the size of the fort. Over the ramparts it is almost exactly $4\frac{1}{2}$ acres in extent ; its interior area is about 3·6 acres. This is decidedly above the average size in Scotland of a fort garrisoned by an auxiliary cohort of (nominally) 500 men. Birrens, with an interior area of 3·8 acres, and Castlecary, with an interior area of 3·6 acres, are proved by inscriptions to have been garrisoned by cohorts of a nominal strength of 1000, and in each of these cases the cohort included a contingent of mounted men, for whose horses stabling had to be provided. Bothwellhaugh may well have been designed for a milliary cohort.

At present there is no evidence of an occupation earlier than the Antonine period, to which all the datable finds belong. The finds as a whole are a more meagre collection than one would expect from a garrison of the strength indicated by the size of the fort. And in this connection it may be recalled that a long trench cut diagonally across the central area of the enclosure encountered no certain traces of such foundations as might be expected to survive the removal (whether for building purposes or for agricultural reasons) of overlying stonework. This circumstance, and the striking paucity of the finds as they appeared before the collection was supplemented by the military excavations, raised the question at one time whether the enclosure under examination was, actually, a fort and not merely an annexe to a fort lying in the adjacent field to the north-east, which is the one traditionally known as 'Roman field'. But the whole character of the defences proves conclusively that the enclosure was designed as a fort. The area to the north-east (Plate LVIII) has not been explored, but the suggestion that there was here the site of a fort or successive forts is a possibility which must be borne in mind.

At the same time, the negative evidence which has been mentioned may suggest a doubt as to whether the history of this Antonine fort followed the normal course, and the doubt may appear to be reinforced by an unusual feature presented by the defences. If the outer margin of the rampart coincided with the edge of the stone base, as the inner margin did, then on three sides of the fort there was a space of 32·36 feet between the rampart and the ditch-system, as compared with 22 feet on the remaining (south-west) side. 32·6 feet is so exceptional a width for a berm as to suggest the possibility that the original plan had provided for the cutting of a ditch in this space and that the plan had never been



BOTHWELLHAUGH
ROMAN FORT
GENERAL PLAN OF SITE

carried out. Alternatively, it might be supposed that, after the ditch-system had been completed, it was decided to reduce a little the proposed circuit of the enclosure and that it was never considered necessary to break up the unusually wide space thus left outside the rampart on three sides by the insertion there of an additional ditch. But these are hazardous conjectures, and there are analogies to warn us that too much stress may be put on such features as variations of berm. The forts at Castlecary and Balmuldy were both encircled by a massive wall of stone, yet there is a striking difference in the width given in each case to the interval between wall and ditch-system. At Castlecary 5 feet was considered a safe allowance. At Balmuldy, where the subsoil is a stiff boulder-clay as at Castlecary, a berm of the same width, one would have thought, would have been found sufficient, but actually the berm there is 20 feet wide on the west and 30 feet wide on the south and east. These dimensions, it will be noticed, approximate closely to those at Bothwellhaugh.

Even if there were stronger reason than there is for suspecting that the defensive system and the interior buildings were never completed, it could not be supposed that the occupation was too brief to permit of their being constructed according to plan. Comparatively meagre as it is, the collection of small objects is considerable enough to show that the occupation of the fort was not a merely temporary one, and this is corroborated by the evidence of the ramp added to the inside of the south-east rampart. The ramp, it will be remembered, was laid over an oven which, to judge by the amount of black matter found in and around it, must have been in use for some time. This implies an interval of some duration between the original construction of the rampart and the addition of the ramp.

The evidence from the ramp suggests a further inference. In its make-up a considerable amount of structural debris was found in the form of broken tiles, presumably from a demolished or ruined building, probably a bathhouse. This may mean that at Bothwellhaugh, as at other forts in southern Scotland, there were two periods of Antonine occupation separated by a destruction of the fort.

This and other matters must await confirmation by further excavation. As things stand, it is clear that the ruins which have been examined represent the defences of a Roman fort and that the fort was occupied in the Antonine period.

LOUDOUN HILL

BY J. K. ST. JOSEPH

The moorland waste near Loudoun Hill on the east boundary of Ayrshire has been the scene of not a few military adventures. The memory of Wallace's defence against the English is still preserved there in place-name and tradition, and nearby is Drumclog, the site of the famous Covenanters' engagement. The easy route by Avondale to the west coast confers special military importance on this pass, and the Roman scheme for controlling lines of communication included the placing of a fort here at the watershed between the Avon and Irvine valleys. The position selected, an elevated plateau now called the Beg, is overlooked by the peak of Loudoun Hill but at too great a distance to place defenders at a military disadvantage (Plate LXIII). To the east the view from the fort extends beyond Glengavel Water, westward the Irvine valley broadens towards the coastal plain, and the sky-line is formed by the mountainous profile of Arran.

The ground falls very steeply for about 60 feet outside the north-east, south-east and south-west ramparts of the fort (Plate LXIII) · only on the north-west is there a gradual ascent (Plate LXIV). By 1938 agriculture had greatly reduced the defences but the site was then much as described by the minister of Galston parish a century ago :

It is evidently a Roman camp, chosen and fortified with all the military science for which that celebrated people were distinguished. Its ramparts, though much reduced by time and the depredations of the husbandman, may be distinctly traced throughout its whole extent, and the Praetorian and Decuman gates are in a state of tolerable preservation. The original camp to which these remarks apply is 180 yards long and 114 broad, but there is another inclosure upon a lower level towards the south, which seems to have been added upon a subsequent occasion, to accommodate a larger force, or perhaps originally designed for the quarters of the allies. This addition lengthens out the parallelogram to 258 yards. It does not appear that there have been any gates at the extremities of the Principia, and, indeed, it is not to be expected from the



Photo A McGregor

SITE OF ROMAN FORT NEAR LOUDOUN HILL, LOOKING NORTH-NORTH-EAST
(The Fort lay on the plateau in the left foreground, half-a-mile beyond it is the
peak of Loudoun Hill)

PLATE LXIV

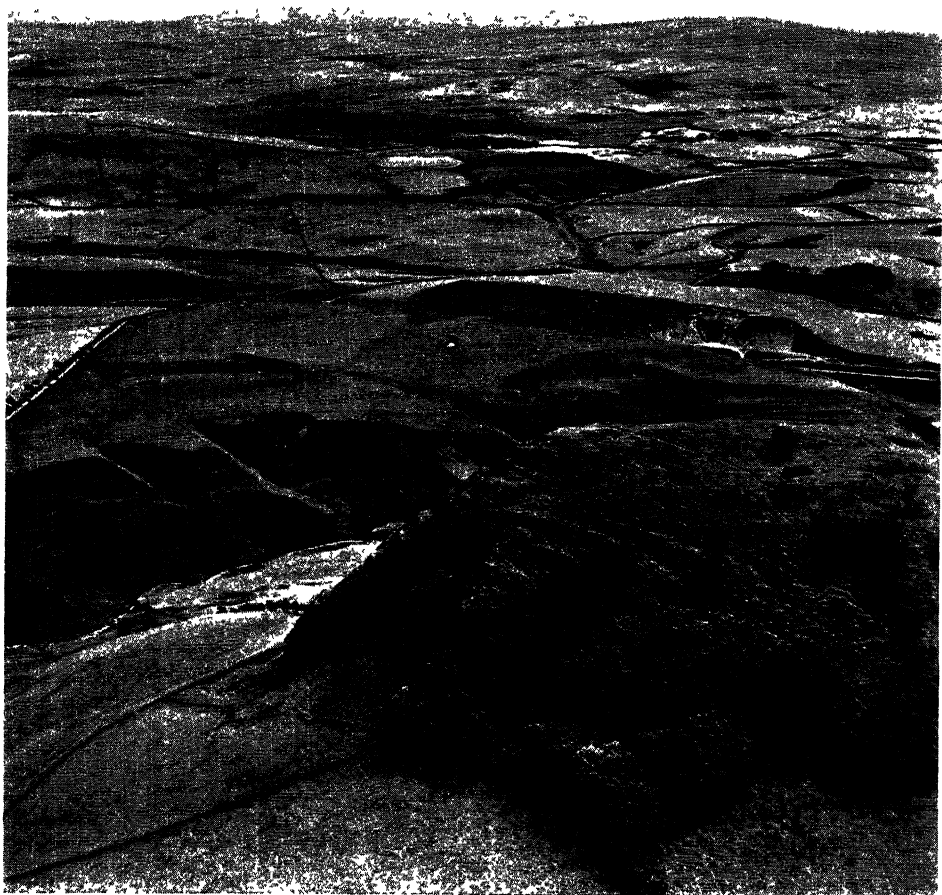


Photo. A. McGregor

SITE OF ROMAN FORT, LOOKING OVER LOUDOUN HILL FROM NORTH-NORTH-EAST
(The Fort lay on the plateau immediately above the gravel-pit in the middle distance)

nature of the ground, which on the right and left sides slopes downwards for 20 or 30 yards, with the declivity of a rampart. Upon one of these slopes there was found in the year 1831, a silver coin in good preservation, having this inscription, CAESAR AVGVSTVS DIVI F. PATER PATRIAE. This coin is now in the possession of Thomas Brown, Esq., the proprietor of the estate on which the camp is situated, who is also in possession of another Roman coin, found along with many more, a little to the eastward in the parish of Avondale, and inscribed DIVVS ANTONINVS. These facts and observations taken in connection with the existence of a Roman military way, which may still be traced on the opposite bank of the Irvine, furnish incontestable evidence that the parish of Galston has received at least one visit from the masters of the world¹

In 1938² ditch-sections were visible in the face of a gravel-pit which now encroaches on the north angle (Plate LXIV), and the low mound of the rampart could be traced on three sides. A long trench across the north-west defences 75 feet from the north angle showed the rampart to be about 34 feet in width and to consist of turf, much of it in the form of great clods of heather-turf cut from the neighbouring moorland. The moraines here are composed of loose gravel and sand, and the wide berm (Plate XXXVIII) is an adaptation to these local conditions, for the thrust of a heavy rampart might easily cause the collapse of the near face of a ditch dug in unconsolidated material unless ample interval were allowed. The north-west is the weakest side and accordingly the ditch-system here is designed in depth: there are three ditches, measuring, as exposed in the gravel-pit, 10, 8, and 6 feet in width, and the outermost lies 100 feet from the rampart centre. Below the turf-work at the back of the rampart a fragment of a small Samian cup (form 27) was recovered from the original surface.

A post-hole 6 inches in diameter occurred near the rearward edge of the rampart, and the trench then encountered the *intervallum*-road, 19 feet wide. Beyond, three sleeper-trenches marked the foundations of a

¹ *New Stat Account*, v (1837), p 181. Cf. J Smith, *Prehistoric Man in Ayrshire* (1895), p 103 (the writer has been misled by field-boundaries); Christison, *Early Fortifications in Scotland* (1898), p 267; Ordnance Maps, 6-inch scale, sheet Ayrshire xx, SW. A golf course laid out over the site was in use from about 1912 to 1924.

² The writer first examined the site on 7th September 1938, and excavations were undertaken a week later. For permission to excavate acknowledgment is due to the late Sir Herbert Cayzer, Mr. Wardhaugh, factor, and Mr. Hamilton, tenant.

timber building. The first two, 15 inches in width and cut 8 inches deep in the clean, yellow sand, were 5 feet apart, the third, 11 inches wide, came at a distance of 25 feet (Plate XXXVIII). A single occupation-layer, marked by charcoal and ashes 15 inches below the surface, yielded pieces of an amphora, a blue paste melon-bead, and part of the rim of a mortarium of Antonine type. In the interior of the fort a trial trench showed that a low hump which crosses the field at a distance of 180 feet from the north-west rampart is a modern agricultural division. Below the tilth here were stone-packed sleeper-trenches and an occupation-layer from which a fragment of an early decorated Samian bowl (form 37) was recovered.

The whole of the north-east rampart is visible, though it is capped by a large field-bank for the northern third of its length; of the south-east rampart 105 feet remain near the east angle. A trench dug about 100 yards from the west angle located the south-west rampart where it is no longer visible on the surface. The construction was similar to that found in the main section, but the rampart-centre lay only 12 feet from the scarp, so that the front has probably collapsed down the slope. At the south angle also there appears to have been erosion. These observations enable the dimensions over the rampart-centres to be estimated approximately at 480 feet (from the north-west to south-east) by 280 feet. On the south-east side two ditches appear curving round the east angle at 30 feet and 100 feet respectively from the rampart. The steep slopes to north-east and south-west would hardly have permitted of the construction of ditches on these sides.

It is evident on the ground that the easiest approach to the fort is from the north, and a gate may therefore be assumed in the north-west rampart, though it is not possible to confirm this now by surface inspection. A slight hollow in the north-east rampart 225 feet from the north angle may mark a gate; there are no traces of one at the corresponding position in the rampart opposite, nor in the centre of the south-east side. The approach to the plateau on these three sides is now so steep as hardly to permit the ascent of wheeled vehicles except by an oblique farm-track leading up the south-east slope. On the level summit the Roman engineers have enclosed as large a space as was available, and it is therefore the shape of the plateau that has given the fort its unusual proportions. In such a fort it is not easy to guess the arrangement of the

interior buildings, but their foundations appear to be comparatively intact, and the complete plan should be recoverable by a more extensive excavation.

The 'other inclosure upon a lower level towards the south' is indicated in outline on the Ordnance Map (cf. Plate XXV) and can still be traced. The steep south-east slope is awkward ground for an annexe, and in part at least the ridges there seem to be old field-dykes. A section through the south bank revealed a spread of hard gravel over a width of 12 feet, without giving any clue to purpose or date.

In this limited exploration of the site no structural evidence of more than one period was found, but the handful of potsherds recovered included, along with two or three pieces of Antonine type, at least one piece of earlier date—a small fragment (referred to as coming from the interior of the fort) of a decorated Samian bowl (form 37) showing a straight wreath as the lower border of a decorated surface. Its suggestion of a Flavian occupation is reinforced by the one coin recorded from the site—the *denarius* of Augustus 'in good preservation' mentioned in the *New Statistical Account*.

Between 1938 and 1946 the gravel-pit continued to encroach upon the north angle of the fort. Fragments of Roman pottery, a bronze lamp, querns and iron-work were recovered from the working-face of the pit.¹ The pottery included a substantial proportion of pieces of Flavian date.

In August 1946 excavations were resumed. The results of this more recent work, along with a description of the objects preserved from the site, will be published in due course. Meanwhile it may be said that more than one work earlier than the Antonine fort was revealed and that the number of Flavian potsherds were further increased (see also p. 210). It may be added that an air-survey in July of the same year confirmed the existence of an enclosure (annexe?) on the slope to the south-east of the fort, showing it to be defined by two ditches.

¹ Their recovery was due to the vigilance of Mr. A. G. McLeod, Mathematics Master of Darvel Higher Grade School.

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AN HISTORICAL SURVEY

By S. N. MILLER

THE TOPOGRAPHICAL FRAMEWORK

That an old road which could be traced through Annandale to the upper Clyde was a Roman road was agreed among antiquaries and topographers until the last decade of the nineteenth century, when, in 1893, the pervasive scepticism of the period found its way into this remote field and questioned the title of the road to a Roman origin,¹ mainly because there was no convincing proof of a Roman occupation of any sites along its course. Within a few years, excavation by the Society of Antiquaries of Scotland proved that the remains visible at Birrens were those of a Roman fort and that more than one of the entrenchments on the slopes of the neighbouring hill of Burnswark were also Roman work ; but dubiety about the continuance of the road beyond these points persisted, and in the first edition (1924) of the Ordnance Survey Map of Roman Britain no remains were shown in Annandale north of Birrens and Burnswark, and none in upper Clydesdale. In the year in which the Map was published, however, a survey by Mr. O. G. S. Crawford² convinced him that the earlier antiquaries were right about the Roman origin of the road as far as Clydesdale, and drew attention to features of the entrenchment at Little Clyde (Clydes Burn), which left no doubt that it was a Roman camp. Accordingly, a continuation of the road from Birrens to that point was shown in the second (1928) edition of the Map, a camp planned by Roy at Torwood Muir, near Lockerbie, being now inserted as well as the camp at Little Clyde.

These two temporary marching-camps, however, merely proved that Roman troops at one time or another had moved along this line, and the

¹ *Proc. Soc. Ant. Scot.*, xxviii (1893-4), pp. 298-302.

² See *Journal of Roman Studies*, xiv (1924), p. 207, cf. *Antiquity*, xiii (1939), pp. 281, 283.

already sufficient to complete the proof that the old road traceable through Annandale and upper Clydesdale is a Roman road. As such, it well deserves the detailed description given of it by Mr. St. Joseph, for it presents a remarkable series of significant survivals. Over long stretches of uncultivated land the metalled track and the subsidiary structures, with the pits from which material for the road was obtained, are well enough preserved to illustrate in many particulars the methods of Roman road-builders in a frontier area, and to exhibit the devices they employed to overcome the difficulties presented by rough and broken country.

West of the road the current (second) edition of the O.S. Map of Roman Britain shows no remains. The map which accompanies this Report (Plate LXVI) shows two lengths of road and five occupied sites (see also Pref, p viii). These are mostly restorations rather than new discoveries, for the roads and three of the sites (Ward Law, Carzield and Durisdeer) were recorded as Roman in the eighteenth and nineteenth centuries. They were victims of the same scepticism as threatened the road from which they were offshoots.¹ Speaking both of Annandale and of the country to the west of it, Macdonald expressed the opinion that the Romans 'never mastered this part of Scotland' and questioned 'whether they ever seriously attempted to do so', and in his criticism of their strategical scheme he described this region as their 'heel of Achilles'.²

Of the two branch-roads to Nithsdale described by Mr. St. Joseph the more southerly crossed the Annan near its junction with the Dryfe and is traceable by Lochmaben to within some six miles of the fort at Carzield, five miles north of Dumfries, which was shown to have been designed for a cavalry unit by excavations conducted for the Dumfriesshire and Galloway Society in 1939 by Mr. Eric Birley and Mr. I. A. Richmond.³ A mile to the north of this site, at Galloberry, Mr. Crawford's air reconnaissance in June of that year revealed an earthwork⁴ which

¹ *Proc. Soc. Ant. Scot.*, xxviii (1893-4), pp. 299, 316.

² *Agricola in Britain* (Presidential Address to the Classical Association, 1932), p. 12, *The Roman Wall in Scotland*, p. 357 (References are to the 2nd edition (1931), unless otherwise stated)

³ *Dumfriesshire and Galloway Trans.*, 3rd Ser., xxii (1942), pp. 156-63.

⁴ *Antiquity*, xiii (1939), Pl. v, A, cf. p. 285.

Mr. St. Joseph subsequently proved by excavation to be a small temporary camp of the Roman period. In the course of the same reconnaissance an enclosure on Ward Law, near the mouth of the Nith, of which 'faint vestiges' had been noted in the eighteenth century and which had been retraced on the ground by Mr. Crawford earlier in the year, was observed and photographed from the air.¹ In August of the same year Mr. St. Joseph followed up a re-examination of the enclosure on the ground by digging some trial trenches, which confirmed the Roman origin ascribed to it in the eighteenth century and showed it to be a work of a permanent kind enclosing an area of no less than $7\frac{1}{2}$ acres. In 1945 he observed from the air a small work some two or three hundred yards to the west.

Along the ridge on which these works stand, between the Nith and Lochar Moss, a road, he points out, would run to Carzield. There it would make connection with the road referred to as joining the main road through Annandale near the junction of the Dryfe with the Annan, and also with a road passing up Nithsdale to Durisdeer (pp. 48-9) and thence to the main road at Crawford, in upper Clydesdale. As the starting-point on the Solway of that system of communications, Ward Law, Mr. St. Joseph suggests, 'may have seen much traffic passing the Firth by some sheltered harbour near old Caerlaverock.' The use of the harbour may not have been confined to such traffic. In remarking on the suitability of Ward Law as a site for an outpost to Hadrian's Wall, Mr. St. Joseph notes that from there signals could be exchanged with the forts on the opposite side of the Firth: it might also be suggested that such a harbour as he supposes may have served as a station for a few vessels supplementing the stations which prolonged the Wall-system along the Cumberland coast in preventing smugglers and raiders from rounding the barrier by water.

The second of the two roads to Nithsdale described by Mr. St. Joseph is that which has just been mentioned as connecting with the trunk road at Crawford. Crossing the Clyde under the protection of the fort there, it ran some three miles upstream before striking westwards up the Potrail Water and over the watershed to the Kirk Burn, which flows into the Carron Water about $3\frac{1}{2}$ miles above its junction with the Nith. The traditional belief that this was a Roman road has been confirmed by Mr.

¹ *Ibid.*, Pl. iv, A, cf. p. 284.

St Joseph's survey and definitely verified by Mr. Clarke's excavation of the earthwork on the Kirk Burn, a mile above Durisdeer Church.

As Mr. Clarke points out, the position of the earthwork down the western side of the watershed connects it closely with Nithsdale, and Mr. St. Joseph notes that the road is actually traceable as far as Durisdeer, a mile west of the earthwork. For these reasons they are agreed that the work was not a terminal point but a post on a road which connected with, or continued, a road up Nithsdale from Carzield. Though a ground survey by Mr. St. Joseph failed to detect traces of such a road between Carzield and Durisdeer, the view that it existed has been confirmed by his discovery, made from the air in 1945 and tested by excavation in July of the following year, of a small enclosure of the Milton type at Barburgh Mill (p. 123), about $4\frac{1}{2}$ miles south of Thornhill. As defined by such a road as this station implies, the Nithsdale system would enclose, not only the plain of the lower Nith, but also the hill country lying between Nithsdale and the road through Annandale and upper Clydesdale. It would thus protect the main line of communication on its western flank, and would serve as a bastion against the dangers lurking in the remoter hills of Galloway and southern Ayrshire.

Beyond Crawford the general trend of the main road changes from north to north-east, following the course of the Clyde. At Biggar, twelve miles down the river from Crawford, supposed vestiges of Roman occupation have been recorded from time to time. While noting the slightness of such evidence, Mr. St. Joseph emphasizes the suitability of Biggar as a position for a fort on strategical and tactical grounds, and makes a suggestion as to the actual site which a fort here would be likely to have occupied.

Near Biggar, where the Clyde makes a right-angled bend to the north-west, Roy suggested that the road, 'if actually finished here',¹ may have made a corresponding bend by Libberton to the fort of Castledykes. Neither Mr. Crawford nor Mr. St. Joseph has recognized any traces of a road on that line, nor does Roy mention any as visible in his time: that he was, in fact, merely guessing is shown by the terms in which he makes his suggestion. Whether or not there was ever a direct connection between Biggar and Castledykes, it now appears that beyond

¹ *Milt. Ant.*, p. 104.

Biggar the trunk road left the Clyde valley and continued its north-easterly course, running south of the Pentlands, as described by Mr St Joseph,¹ towards the estuary of the Forth at Inveresk.

So long as the existence of a Roman road through Annandale to the upper Clyde about Biggar was unquestioned, it was taken for granted that a road from Castledykes down the Clyde valley to the western end of the Forth-Clyde isthmus was a northward continuation of it, in spite of the lack of any definite evidence for a link between Biggar and Castledykes. When, however, doubt was expressed as to whether the western road had ever extended beyond Birrens, the suggestion was made that the road from Castledykes to the western end of the isthmus was to be explained as a northward continuation of a road branching off from the eastern road about Newstead and running up the Tweed valley to the fort at Lyne,² whence it would cross to the valley of the Clyde at Castledykes.³ This view of the place of Castledykes in the Roman road-system of southern Scotland, so far from being disproved by the evidence which has now established the existence of a Roman road to Clydesdale from Annandale, has been confirmed by it, since the course of this road, as now determined, does not approach within eight miles of the fort. This had been reached from Lyne by a road of which Mr. St. Joseph has described the probable course: up the Lyne Water to its junction with the Tarth and thence by the Tarth valley to Melbourne cross-roads, where it would cross the road from Biggar. Between this point and Castledykes he suggests that a rectangular entrenchment on a commanding summit at Crawcraigs, near Newbigging, may be the remains of a Roman station. He also suggests that from the junction of the Lyne Water with the Tarth a branch road may have continued along the Lyne Water to join the road from Biggar near Carlups, whereabout there may have been a fort.

In tracing the course of the road north of Castledykes, Mr. Davidson has been able to fix two points by the evidence of excavation. He has exposed a well preserved specimen of its actual structure a little to the

¹ See also *Antiquity*, xvi (1939), p. 283, n.

² For the course of the road east of Lyne, see *Proc. Soc. Ant. Scot.*, lxxix (1944-5), pp. 170-2.

³ Macdonald, *Dumfriesshire and Galloway Trans.*, 3rd Ser., viii (1923), pp. 89-90, *Agriкола in Britain*, p. 12.

south of the farmhouse of Collielaw, where, after crossing the Mouse, it is ascending towards Kilcadzow Hill, and he has unearthed remains of a Roman station which he identified near Bothwellhaugh, at the junction of the South Calder Water with the Clyde. This notable discovery, which was made in May 1937 and was the first fruit of the Society's investigation, marks the point where the road, descending from the high ground flanking the Clyde valley on the east, enters the broad plain traversed by the river in the lower part of its course. This of itself is enough to show that the road is making towards the western end of the chain of forts which extended across the isthmus from Forth to Clyde both in the Flavian and in the Antonine period. The indication is the more valuable because the course of the road from Wishaw onwards has been overlaid by the spread of industrialism. Even before the area had been so transformed, Roy knew only of 'some traces of it . . . lately to be seen' between the North Calder Water, a little above its junction with the Clyde, and Tollcross.¹ At Tollcross the road would be little more than four miles from the nearest (Balmuildy) of the isthmus forts.

The isthmus system was thus given the necessary communication with the south at its western end by a road which also helped to consolidate the Roman hold over the country to the rear of it by providing the means of controlling the central part of the Southern Uplands, and which unified the system by converging backwards, by an easy and direct route, upon the road which ran from the south to its eastern end. The point of convergence would be at or near Newstead, and the great fort there would thus serve as a base for the whole isthmus system.²

The function of the fort of Castledykes, it would seem, must have been analogous to that of the fort at Newstead, though much more limited. If the existence of a small fort at Castle Greg, near West Calder, means that Castledykes was given a line of communication of its own with the estuary of the Forth at Cramond, this would not only emphasize its importance but also its detachment from the main road from upper Clydesdale to the eastern end of the isthmus and its connection with the road from

¹ *Milit. Ant.*, p. 105.

² It is perhaps worth noting in this connection that *C.I.L.*, vii, 1085, now recognized as a milestone, seems to show that at Cramond, whereabouts it was found, the mileage along the eastern road was still being reckoned from Trimontium (Newstead)

Newstead to the western end. In relation to the western end of the isthmus system, the fort, with its internal area of about $6\frac{1}{2}$ acres, must be judged, on the British standard, to have been designed, like its greater counterpart at Newstead, for something more than an ordinary road-station accommodating an auxiliary unit. A fort of its size is found, as a rule, at a nodal point of the lines of communication, from which it exercised some sort of regional function. The area within which Castledykes is situated is one where a series of radial valleys affording means of communication enters the valley of the Clyde, which itself begins here to open towards the plain of the lower river. From its position and size the fort would seem to have served as a base for the western part of the isthmus system, as the fort at Newstead appears to have done for the system as a whole.

One would therefore expect Castledykes to have been connected by road, not only with the western end of the system, but also with a more or less central point. The point that suggests itself is Castlecary. The fort here seems to have been an exceptionally important member of the isthmus series in both the Flavian and Antonine periods, and when it was excavated in 1902 a road issuing from its south gate was 'clearly traced' for some three hundred yards.¹

That a road was supposed to run southwards from Castlecary by Crowbank and Fannyside was remarked upon by Roy, who suggested that it might have been continued by Shotts Kirk to join the road from Castledykes at Belstane, near Carluke. But though he considered it 'reasonable enough to suppose' that 'the Romans must have been desirous to effect such communication' and 'might even have begun it,' he thought it 'doubtful whether it was ever completed.'² Mr. Davidson's survey carries the road as far as Crowbank, an elevated site nearly two miles south of the fort, where he suggests there may have been a signalling station to keep an eye on a wide tract of moorland screened from the fort itself by rising ground. Beyond this point, however, he finds no evidence of a continuance of the road on the line conjectured by Roy.

To Roy, who believed that the western road through Annandale to Clydesdale ran by Castledykes to the lower Clyde, it was 'reasonable enough to suppose' that a branch from it would converge upon the eastern

¹ *Proc. Soc. Anti. Scot.*, xxxvii (1902-3), p. 329

² *Milit. Ant.*, pp. 106-7.

road about Camelon, the gateway to the north, by a direct line which would cut out the wide detour by the western end of the isthmus ; and such direct communication would be suitably provided by a road branching off from the Castledykes road about Carluke to run to Camelon by Castlecary. But this particular reason loses much of its force now that it appears that the western road, passing Castledykes at a distance of quite eight miles from it, had already joined the eastern road, before it reached Camelon, in the neighbourhood of the Forth estuary , and that a road from about Carluke to Castlecary, viewed as a link in the lines of through communication, would merely enable a road from Newstead by Castledykes to the western end of the isthmus to be used also as a loop to the eastern road from Newstead to Camelon.

But if there is now less reason than there was for supposing such a link in the lines of through communication, it is still probable that direct communication between Castledykes and Castlecary would be a feature of the organization of the western half of the isthmus system, if the fort of Castledykes played the part in it which its position and size seem to indicate. For such a road Mr. Davidson suggests (p 87), as an alternative to Roy's line, a course which would better serve this localized purpose.

The importance of Castledykes as a base is emphasized by the fact that there or thereabout a road branched off westwards across the Clyde. The existence of this road was recognized by Roy,¹ who took it up Avondale and 'by the gorge of Loudon-hill' to the Ayrshire coast. It was set aside, however, by the same scepticism as we have seen at work further south. It came to be generally accepted that the Romans never penetrated into Ayrshire, and indeed this area is expressly included with Galloway in Macdonald's description of south-western Scotland as their 'heel of Achilles'. In recent years, however, this scepticism about Roy's Avondale road has not been shared by Mr. Davidson, Mr. Clarke and others who have studied its course, and now Mr. St. Joseph has put the matter beyond doubt by proving that the site of the reputed Roman 'camp' at Allanton, near Loudon Hill, was, in fact, occupied by a Roman fort. This discovery did not come merely by a survey of the ground.²

¹ *Milit. Ant.*, p 106

² A number of air-photographs taken for Mr. Davidson between May and July, 1938, two of which are reproduced as Plates LXIII and LXIV, disclosed no convincing evidence of structural remains

Suspecting that a gravel pit at the north corner of the site might be beginning to encroach upon the outline of the enclosure, Mr. St. Joseph traversed the face of the pit along a ledge near the surface of the ground, and from there he saw, what was not visible either from above or below, three V-shaped indentations of dark soil showing up against the light-coloured gravel. His surmise that these marked out the ditches of a fort was soon verified by a trench on the surface.

Although the exact point at which the road diverged from the Castledykes road remains uncertain, its course can be traced up Avondale to near Loudoun Hill, as described by Mr. St. Joseph. Roy suggested that 'its after course through Airshire . . . led, at least, as far as Air',¹ but Mr. St. Joseph, in pointing out that at Loudoun Hill the road is crossing the watershed separating Avondale from the valley of the Irvine Water, emphasizes the fact that the view from the site of the fort down the valley to the sea gives a strong impression that the road which the fort was intended to control ran to a harbour at the mouth of the Irvine Water. A harbour here, he notes, would lie at a suitable point on the long stretch of coast between the Solway and the upper end of the Clyde estuary; and there is harbourage good enough to have served for the sea-borne trade of Glasgow until the building of Port Glasgow. In any case the Avondale road and the fort at Loudoun Hill form a genuine fragment of the topography of Roman Scotland, and with this, as with the occupied area west of Annandale and upper Clydesdale, we recover a significant part of the strategical scheme and history of the occupation. In a general way the Avondale system was the northern counterpart of the Nithsdale system. At present, however, it cannot be regarded as a northward extension of it, for there does not appear to have been any direct road-communication between the two. As the evidence stands, it seems to present the two systems as detached from one another.

THE EARLY OCCUPATION

Until 1946 no site on the western road from Carlisle to the Firth of Forth was known from the evidence of datable objects to have been occupied by Roman troops in the Flavian period. In that year Mr.

¹ Roy, loc. cit.

Clarke's exploration at Milton of the area to the east and north-east of the small Antonine post which he had previously excavated produced pottery which proved the Flavian origin of an earlier occupation represented by at least two successive forts (pp. 109-10, see also Pref. p. viii). The full significance of this discovery is seen when it is considered in relation to the course of the road at this point. The road running alongside the Antonine post, and contemporary with it, is a loop from, or a diversion of, a road which had been laid out further to the east (p. 16) on a line which brought it into immediate connection with the larger works of the earlier occupation. From the Flavian origin of this occupation, therefore, it can be inferred that the western road through southern Scotland, like the eastern road from Newstead, was laid out by Agricola.

The permanent system of communications in a frontier area was normally a fixing and hardening of the original lines of penetration. We know from Tacitus that in Scotland the process began in the actual year of the advance with the construction of forts by the troops as they moved north,¹ and the eastern and western roads coincide with lines of march marked out by temporary camps. This recalls Roy's argument from the sizes and distribution of the major marching-camps in Scotland as known in his time. He pointed out that they were in two sizes and that those of the larger size (round about 100 acres) were to be found only along a single route that led northward from the Forth-Clyde isthmus, while those to the south of this were all of the smaller size (about 50 acres by his estimate) and occurred along two different routes—on an eastern route, as at Towford and Channelkirk, and on a western route, as at Torwood Muir and Cleghorn. The probable explanation, he considered, was that the force which entrenched the large camps north of the isthmus had advanced through southern Scotland in two columns.²

¹ *Agric.* 22: *novas gentis aperuit . . . ponendisq[ue] insuper castellis spatium fuit.*

² *Milt. Ant.*, pp. 60-2, 79-80. There is no mention there of the Towford camp, but it is marked on his map (Pl. i) and he gives a plan of it on Pl. xxii. It was not known to him until after the text of his work had been completed (Macdonald, *Archaeologia*, lxxviii (1917), pp. 200-2).

For the strength of an Agricolan army north of the isthmus we get some indication from Tacitus, *Agric.* 35, 37. A composite field-force of the total strength there implied would require for its accommodation a camp of the larger size.

Roy supposed, it will be seen, that the western column reached the isthmus by way of Cleghorn. The camp here, however, is most naturally associated with the neighbouring fort of Castledykes and connected with a branch from the eastern route about Newstead, not with the western route from Annandale, which, as represented by the permanent road, did not approach within eight miles of the camp but left the valley of the Clyde at Biggar and maintained a north-easterly course south of the Pentlands. Disembarrassed of the camp at Cleghorn, Roy's argument adjusts itself readily to this more reasonable line, and fits in with the inference to be drawn from the permanent roads and forts as we now know them—that Agricola advanced through southern Scotland by two routes, an eastern and a western, which converged with one another and with communication by sea in the immediate neighbourhood of the Forth estuary, the natural starting-point of the single route that ran northwards from the isthmus east of the mountain zone.

Since Roy's time an additional camp on the eastern route has been discovered at Newstead, and on the western route one has been recognised at Little Clyde. That at Newstead presented some evidence that it had been entrenched by an Agricolan army.¹ Both conform to Roy's rule in being of the smaller size. Here again, however, it would seem that his statement of the case requires to be modified. He supposed that on both routes the camps were uniformly about 50 acres in extent. As a rough estimate for the camps on the eastern line that figure may stand, but for those on the western route, it now appears, it is decidedly too high. Air and ground observation has shown that the camp at Torwood Muir had an area of only about 35 acres, while that at Little Clyde, about 24 miles further north, seems to have been a few acres smaller.² It looks as if the western column had been appreciably weaker than the other.

In 1932 Macdonald noted that, among 'the meagre handful of objects' from Lyne deposited in the National Museum in Edinburgh after

¹ James Curle, *The Fort of Newstead*, pp. 19-20.

² The camp near Beattock which Mr. St. Joseph observed from the air in 1945 and 1946 appears to have been much too small (p. 111) to have belonged to the same series as those at Torwood Muir and Little Clyde, though the interval between it and Little Clyde (some 10-11 miles) is a suitable one.

the excavation of the site in 1900, 'one of the four tiny scraps of figured Samian was undoubtedly of South Gaulish manufacture.'¹ From this he inferred that the route from Newstead to the Clyde at Castledykes had 'in all likelihood' been opened up by Agricola. Likelihood has been changed to certainty by the remains of Flavian occupation revealed by Miss Robertson's excavations at Castledykes. For a continuation of the road down the valley of the lower Clyde at that period we have at present no direct evidence, for the datable objects found by Mr. Davidson within the enclosure he excavated near Bothwellhaugh, some fifteen miles down the river from Castledykes, were all Antonine. The possibilities here, however, have not yet been fully explored, as Mr. Davidson warns us: in particular he draws attention (p. 186) to the level ground to the north-east of the excavated area as a likely site for a fort.

There is no room for any such hesitation about the date of the continuation of the road westwards from about Castledykes across the Clyde to the fort near Loudoun Hill. The objects from this site prove that the road was in use in the Flavian period. The opening up of the route can safely be attributed to Agricola, and indeed it can reasonably be assigned to a particular campaign.

There would be no occasion for the penetration of this detached western area in Agricola's original advance into Scotland in his third year as governor (80). On the other hand, it would be a natural sequel to his construction in his fourth year (81) of a chain of forts from the Forth to the Clyde, for this great coastward projection of land would then be recognized as an immediate danger to the isthmus system, especially as it would make it easy, if left unguarded, for the line of forts to be out-flanked, and also invited the landing of Celts from Ireland, a possibility which Agricola had in mind when he chose the scene of his fifth campaign. For these reasons the year of the fifth campaign (82) is the probable year of the laying out of the road up Avondale.

The fort of Loudoun Hill stands at the watershed between the Avon and the Irvine Water, and Mr. St. Joseph's view that the road which it guarded would run to a harbour at the mouth of the Irvine Water

¹ *Agricola in Britain*, p. 12.

seems a very probable one.¹ In any case it is obvious from the site chosen for the fort, with its view down the valley of the Irvine Water to its mouth and across the Clyde estuary to the hills of Arran, that the intention was to observe and control movement about this coastal area.

Primarily, the Avondale system would be no more than a further measure of consolidation, a supplement to the fortification of the isthmus, before Agricola resumed his northward advance, but there is the marching-camp at Cleghorn, about a mile and a half to the north of Castledykes,² to remind us (whatever the date of the camp) that such measures were usually preceded by clearing operations in the field, especially when, as now, new territory was being penetrated.

If we say, then, that in the fifth year of his campaigns Agricola was engaged with tribes hitherto unknown, and stationed troops in an area facing Ireland, we shall be giving a fair summary of the conclusions which the surviving remains lead us to. We shall also be giving a fairly close translation of the account of that year's campaign in the twenty-fourth chapter of the *Agricola*. The correspondence suggests that now for the first time we have in our hands the key to that obscure passage of Tacitus' text.

We can now turn to the occupation that followed Agricola's

¹ Mr St. Joseph's remark (p. 65) that a harbour here would lie at a suitable point on the long stretch of coast between the Solway and the upper part of the Clyde estuary would apply equally to the Flavian and the Antonine period, which are both represented in the remains discovered on the site at Loudoun Hill. Possible indications of the use of a harbour in the time of Agricola might be drawn from the accounts given by Tacitus and Dio of the escapade in 83 of the mutinous Usipi who seized three ships and put to sea in them. The setting of this incident in the narrative of Tacitus (*Agric.* 28) and the fact that the mutineers seem to have drifted round the north coast of Britain make it probable that the harbour from which they set out would be in Scotland, and it would be on the west coast of Scotland, to judge by Dio's account (lxvi, 20), according to which they sailed from west to east. In the Antonine period a road seems to have run from the western end of the Wall to a harbour at Dumbarton, and it is just possible that Agricola also may have made use of a harbour there. But the landlocked waters thereabout would be a much less likely starting-point for the adventure of the Usipi than the more open estuary.

² In 1946 Mr. St. Joseph observed from the air what appeared to be another marching-camp, a short distance to the west of the fort.

campaigns.. At Milton, we have seen (p 205), it is represented by fragments of early pottery, a permanent road, and at least two successive forts lying alongside the small Antonine earthwork. The full working out of the evidence on this site will be awaited with great interest, for it promises to present us in miniature with a pattern of the Roman occupation over a large area. Into the outline of the early occupation as so far defined by Mr. Clarke the evidence of Birrens, as now enlarged by air observation, fits very closely: here also a second-century occupation, represented in this case by the twice-excavated fort assigned to the reign of Hadrian, seems to have been preceded by two successive forts (p. 96), both apparently impinged upon by its western defences.¹ From the concordant evidence of these two sites,² some twenty miles apart, it can be inferred that the western road, like the eastern road from Newstead, continued to be a Roman line of communication and control for some time after Agricola's recall.

It is now clear also that the line opened up by Agricola from about Newstead to Castledykes and from there to Loudoun Hill was equally permanent. At Castledykes Miss Robertson has discovered by a careful examination of the defences that the builders of the Antonine fort re-used, with some modifications, the ditch-system of a Flavian fort. She has also detected, outside the eastern half of the north front of this fort and its Antonine successor, remains which might possibly belong to a work earlier than either—a length of ditch accompanying a trench that

¹ The post-holes noted by Mr Eric Birley within the western part of the Hadrianic stone fort but not on its alignment (*Proc Soc Ant Scot.*, lxxii (1937-8), pp 344-5) may belong to one or other of the western works that overlap with it. It may be added that these early works at Birrens may have had a brief precursor on Burnswark Hill, three miles away, where the south gateway of the western half of the 'north camp' shows an arrangement that recalls one of the forms of the *clavicula*-device characteristic of Agricolan work

² There is a piece of structural evidence discovered by Mr St. Joseph at Fairholm which calls for mention here—'laid turf-work which appeared to extend in a north and south direction too far away to have formed part of the square earthwork on Roy's plan.' As Mr. St. Joseph says, 'further digging can alone establish of what structure it formed part' Meanwhile he notes that the site 'lies at a communication-centre' where 'it would be very reasonable to suppose there may have been a fort' (p 100) If a small earthwork was preceded by a fort, we should have the same structural sequence here as at Milton.

may have held a palisade. Further excavation, she warns us, is required before any sure conclusion can be drawn from this structural feature (see Pref. p vii). Meanwhile, on the evidence as it stands, she suggests two successive phases of early occupation (p 167), the first represented by a temporary work, presumably laid out at the time of Agricola's campaigns, the second by a more permanent, and perhaps larger, fort belonging to the subsequent period of occupation. In any case a prolonged occupation of the permanent Flavian fort is proved by the comparative abundance of early pottery.

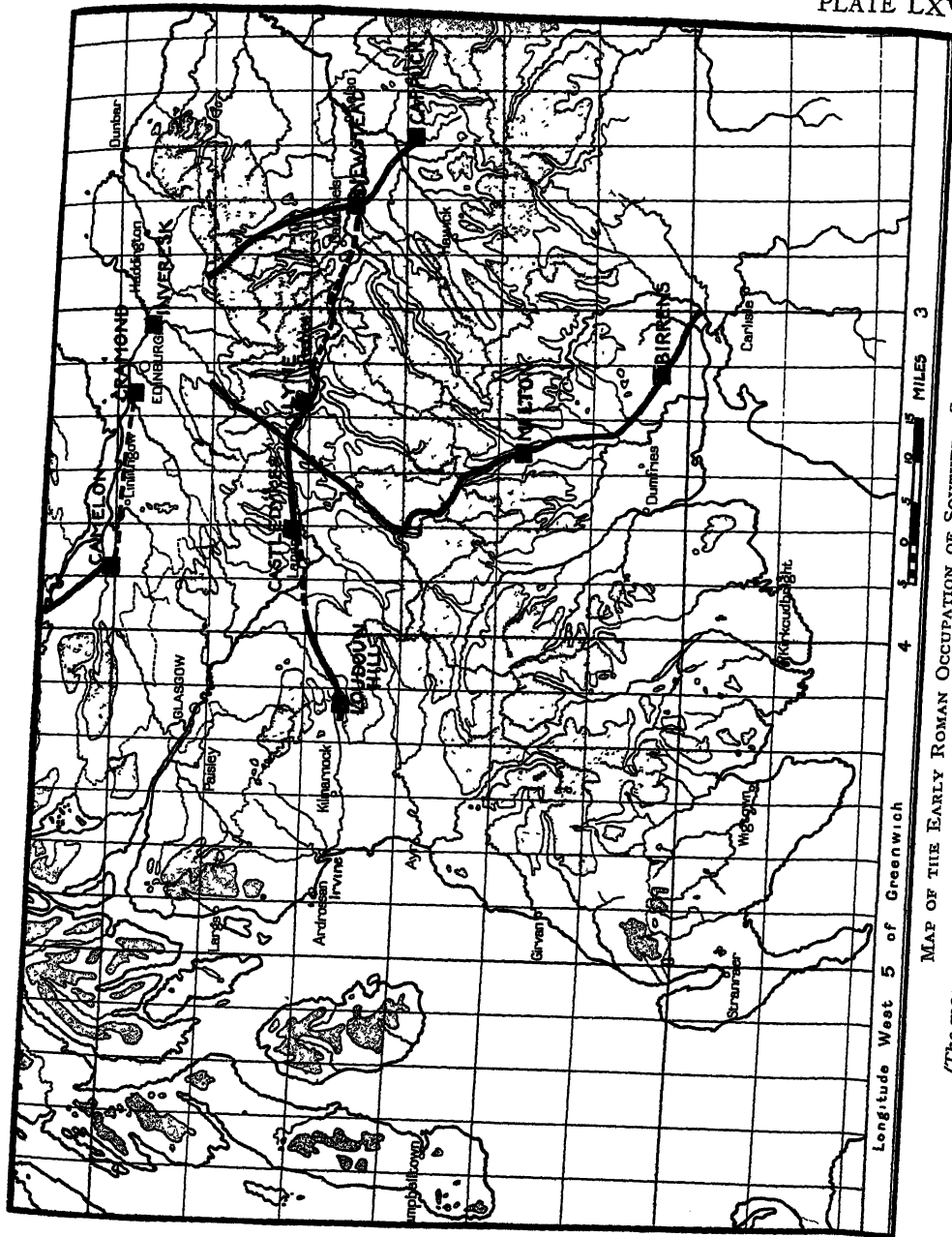
At Loudoun Hill the early occupation¹ must have been no less prolonged. Excavation here has revealed that an Antonine occupation was preceded by a succession of two temporary works and a permanent fort showing two structural periods; and a few score fragments of datable pottery include a large proportion, between a third and a half, of Flavian pieces.

The framework of the early occupation of southern Scotland is now seen to have been very different from the single line known to us in 1937, when the Society began its investigation. That was the line running from Corbridge over Cheviot and so by Newstead to the Firth of Forth, on its way to Inchtuthil and Strathmore. Even for the period before the frontiers had settled into a uniform system of transverse lines, an unsupported penetrative line of that length seemed a hazardous way of controlling so wide a tract of difficult country so recently overrun. We know now that, after Agricola's recall, southern Scotland continued to be controlled by means of at least three patrolled roads (Plate LXV) — the eastern road from Corbridge by Newstead to the Firth of Forth; a converging road to the Firth of Forth from Carlisle by Annandale and upper Clydesdale; and a cross road through the Southern Uplands from Newstead to the Clyde at Castledykes and thence across the river to Loudoun Hill, and probably to the coast about Irvine.²

North of the isthmus the comparatively narrow strip of country to the east of the mountain zone could be secured by a single line. From Camelon a road with forts at suitable intervals, supplemented by outposts,

¹ See p. 191.

² The date of origin of the cross-line towards Newstead from the south-west, indicated by the short length of road recently traced by Mr. I. A. Richmond (*Journal of Roman Studies*, xxxvi (1946), p. 133) from the fort at Raeburnfoot, in Eskdale, to the Borthwick Water, is not yet certainly known. See also Preface, pp vii-viii.



MAP OF THE EARLY ROMAN OCCUPATION OF SOUTHERN SCOTLAND
(The map was prepared by Miss Robertson in 1946. For possible early sites subsequently discovered see *Prof. pp. vii-ix*)

as at Bochart (Pref. p. x), Dealginross and Fendoch, blocking at their upper end the more important lateral valleys opening upon it, ran to the entrance of Strathmore, and thence up the Strath by the fort at Cardean (which can be assumed to be of Flavian origin) to the neighbourhood of Stonehaven, whereabout one would expect a fort to have been established to command the narrow gap there between the Grampians and the sea. Primarily this was a line of penetration, but it so skirted the mountain zone that it would assume increasingly the character of a frontier marking off the highlands from the lowlands.

If this design was completely carried out, the line northwards from Camelon would be supplemented by a westward line penetrating the area to the south of the Campsie Fells and the Kilpatrick Hills and cutting off these ranges and the more mountainous country behind them. While Mumrills and the other forts on the eastern half of the isthmus could now be given up (if that had not already been done), it might be expected that some of those from Castlecary westwards would be retained, especially as the prolonged occupation of the forts at Castledykes and Loudoun Hill might be taken to imply a corresponding duration for the western half of the isthmus series on the analogy of the Antonine scheme, in which they were supporting forts to an isthmus system. But we have at present no evidence for a prolonged occupation of any of the more westerly forts of the series built across the isthmus by Agricola, nor any proof that there was at that time a permanent road connecting the isthmus with Castledykes, for the datable potsherds so far recovered from Bothwellhaugh are all Antonine. It is true that most of the Agricolan forts on the western half of the isthmus are known to us only from the occurrence of occasional fragments of Flavian pottery turned up when the corresponding Antonine forts were being excavated, and that the early enclosures, with two or three exceptions, which may not be representative, have not yet been trenched or even traced, and at Bothwellhaugh the site has not yet been fully explored. It is possible, therefore, that future excavation, or even chance discoveries, may yet put a different face upon the matter.

As things stand, we have no evidence for a more prolonged early occupation of the western half of the isthmus than of the eastern half. It may be that in the conditions of the time the fort at Loudoun Hill, supplemented perhaps by other forts (see Pref. p vii) and supported by

the large fort of Castledykes, was accepted as the best way of closing the system at this end. This westward projection of land had to be held in any case and secured against anticipated disturbances from Ireland, and its occupation would give control of movement across the western end of the isthmus, would allow of greater freedom of action than the dangerously constricted passage between the Kilpatrick Hills and the Clyde, and would make the system less easily outflanked.

For fixing the date at which the early occupation of Scotland came to an end the new material from Milton, Castledykes and Loudoun Hill does not appear to give us any more definite guidance than the material already available from Newstead and elsewhere.¹ Perhaps something decisive may emerge as excavation proceeds, especially at Milton, where the Flavian and Antonine enclosures are sufficiently detached to present their evidence without mutual confusion. Meanwhile we may accept as a guide to the terminal date of the early occupation of Scotland the approximate date that can be assigned to the beginning of the system which superseded it. Between 99 and 109 the military framework in England and Wales, hitherto provisional, was being stabilized in a form that implied the recognition of the Tyne-Solway line as a permanent frontier. In that decade, when the Emperor, Trajan, was preoccupied with two exhausting Dacian wars (101-6), we may place, provisionally, the evacuation of Scotland.

THE ANTONINE PERIOD

When Scotland was reoccupied in 142, in the reign of Antoninus Pius, the western road through Annandale by Milton to upper Clydesdale, converging with the eastern road in the neighbourhood of the Firth of Forth, was re-opened. From the south-west, a cross-road by Raeburnfoot, in Eskdale, to the eastern road about Newstead was laid out or restored.² The other cross-road, that from Newstead to Castledykes, was also restored, with its westward continuation to Loudoun Hill and thence probably to the coast at the mouth of the Irvine Water.

¹ One may note here the discovery on the Loudoun Hill site in 1948 of two *denarii* of Domitian minted in 90-1 and 92, both in fairly good condition but not definitely associated with early structures or levels.

² See p. 210, n. 1. The site at Raeburnfoot has yielded pottery of Antonine date. See St. Joseph, *Dumfriesshire and Galloway Trans.*, 3rd Ser., xxiv (1947), p. 154.

It is for this period that we have evidence to show that the 3-acre fort at Loudoun Hill and the fort of $6\frac{1}{2}$ acres at Castledykes were intended to support a permanent isthmus system, and that the larger fort served as a base for the western part of it. The length of road running southwards from Castlecary, as if to supply a direct line of communication, whatever its exact course (pp 82-7), between the centre of the isthmus and Castledykes, issued from the gate of the Antonine fort, while the datable objects from Bothwellhaugh show that the road from Castledykes to the western end of the isthmus was in use at this time. The isthmus from estuary to estuary was now the frontier. Such forts as were reoccupied to the north of it were mere outposts to a transverse *limites*, in which the cross-road linking together a close-set series of forts was supplemented by the continuous barrier of the Wall.

The Wall-system was no part of the Society's scheme of investigation as originally planned, but an important element of it came to be included in this Report as the result of a chance discovery. In 1941, when the Kelvin was being deepened at Summerston by the Department of Agriculture, debris of a bridge which had carried the Military Way was dredged up from the river—the first discovery made, or at least recorded, of the authentic remains of a Roman bridge in Scotland. The timber superstructure had sprung from stone abutments and had been carried on a stone pier or piers. Such structural details as could be inferred from the stones and timbers that were recovered have been given by Mr. Davidson. One or two matters of a more general kind in his account of the bridge may be emphasized here.

Though the Military Way connecting the forts normally runs some 40-50 yards behind the Wall, the site of the bridge which carried it across the Kelvin, as indicated by the position of the material dredged up from the river-bed, lay only about 10 yards from the Wall-end on the south bank. By this arrangement the bridge, with the Military Way behind its protecting parapet (and perhaps with an obstacle to bar passage through the openings under the platform), would take the place of the Wall and its rampart-walk at the crossing of the river and make the patrolled barrier continuous.

The adjoining fort of Balmuldy, the north-west corner of which lay only some 90 yards distant from the bridge, shared with Castlecary alone

the distinction of being enclosed within a rampart of stone. It would appear that a special importance was attached to it, and this would no doubt reflect the importance of the bridge. The building of stone abutments and a stone pier (or piers) and the massive character of this stonework as represented by the surviving debris suggest that the bridge may have been designed to carry across the river more than the traffic of the Military Way. Actually, a bridge here would be well placed to be a focus for other lines of communication. It would be a convenient terminus on the Limes for the road from Castledykes and Bothwellhaugh, and for such a road as Mr. Davidson suggests may have crossed the Clyde northwards at Yorkhill on its way to the Limes from the coast at Irvine.

The bridge at Balmuildy would be a convenient terminal point on the Limes for communication from the north as well as from the south. In this neighbourhood native traffic through the Blane-valley gap between the Campsie Fells and the Kilpatrick Hills would come down upon the Clyde lowlands, and the bridge would provide a means of canalizing and controlling such traffic. It seems probable that at this point there would be an opening through the Limes, and excavation at the bridge-ends might well reveal the remains of guardhouses and perhaps of other structures appropriate to a passage through a military and customs barrier.¹

It might indeed be expected that the Romans themselves would have run a road outwards from this point to an outpost (or outposts) from which a watch could be kept on the Blane-valley gap, the Kilpatrick Hills patrolled, and signals sent back to the Limes, the most westerly forts of which lay in dangerous proximity to the steep southern escarpment of the range. Between Duntocher and Old Kilpatrick Roy noted 'the unfavourable circumstances of the ground, arising from the vicinity of the mountains in front, which it must have been difficult for the Romans

¹ If remains of an earlier bridge of a substantial kind were found on the same site or a little downstream (since a possible site for an Agricola fort here would be, as at Mumrills, the ground to the west of the Antonine fort, to which access could not be obtained when the Antonine fort was excavated), such a discovery would have some bearing upon the possibility discussed above, pp 211-12. If Agricola intended that all his *praesidia* between Forth and Clyde should be evacuated as his campaigns proceeded, there would be little reason or time for the building of substantial bridges or a substantial (or indeed any) road.

to prevent the enemy getting possession of, and . . . appears to have been the part of their frontier that was the most exposed', and in writing of the Wall at Old Kilpatrick he refers to 'the high mountains coming down here so close to the Clyde, as to have entirely overlooked and commanded those posted behind it.'¹ On our present evidence we can only suppose that the forts at the western end of the Limes themselves maintained a system of hill-patrols and signals.

While Roy remarked on the proximity of the Kilpatrick Hills as a danger to the garrisons of the adjoining Wall-forts, Horsley saw in it a threat to the builders of the Wall. 'When the Romans built this Wall', he says, 'they must have been possessed of these mountains, and the enemy driven farther off, or else they would have been liable to frequent assaults and interruptions as they were building'.² As the evidence stands, there is nothing to show that the Romans ever were possessed of the Kilpatrick Hills, and the builders of the Wall could not but be conscious that they were 'liable to frequent assaults and interruptions'. It is this misgiving that probably accounts for a peculiarity in the method of their building. The 'distance slabs' erected by the working-parties engaged upon the Wall show that, while the building was done in lengths of several thousand paces between the Forth and Castlehill, from that point to the terminus on the Clyde the lengths were reduced to as many feet. To account for this difference of procedure Macdonald suggested that the working-parties, building the Wall from east to west, 'found themselves', on approaching the Clyde, with an odd length upon their hands, which they disposed of by subdividing it between them.³ A simpler explanation suggests itself when one looks beyond the difference of the lengths in which the Wall was built, according as the work was proceeding east or west of Castlehill, to the difference in the disposition of the working-parties that this implies. In the comparatively open country east of Castlehill these were widely extended; west of Castlehill, they worked in close

¹ *Milit. Ant.*, pp. 153, 157.

² *Brit. Rom.*, p. 166.

³ *The Roman Wall in Scotland*, 1st ed. (1911), pp. 308-9. The theory was elaborated from an analysis of the 'distance slabs' in *Journal of Roman Studies*, xi (1921), pp. 1-24, and restated, in a form modified in some details in response to criticism, in the second edition (1931) of the *Roman Wall*, pp. 394-400. The argument is a remarkable exercise in ingenuity, but it presents difficulties and improbabilities even in its revised form.

touch with one another, almost like an army in the field. Here they were working under the immediate threat of 'assaults and interruptions' from the Kilpatrick Hills. It was a sector which they would be anxious to finish off as quickly as possible and where they would have good reason to take special precautions for their security.

Such precautions would be the more necessary here if the builders of the Wall were assisted by natives. The employment of forced native labour was a regular Roman practice,¹ and, as Macdonald said, 'it is not improbable that the Roman soldiers who wrought at the isthmus barrier may have employed natives to fetch and carry for them.'² It would not take long for the natives to learn to do more than fetch and carry. That Britons of the frontier area (*Brittones*) were quick to master the craft of building is proved by work they did from 145-6 onwards on another frontier, where they were settled on the land in groups which supplied for local service units of irregulars (*numeri*), and where they built for themselves the forts and towers they manned. That was as far away as the southern section of the German Limes, but their presence there was closely connected with the building of the Antonine Wall in Scotland. The deportation from frontier areas of natives who might be troublesome in their own country or useful elsewhere was another Roman practice, and the date of the appearance of the *Brittones* in Germany shows that they had been removed there soon after the campaign of Lollius Urbicus in 142³

¹ For Britain, cf. Tacitus, *Agric.* 31. Several inscriptions attest the employment of British labour in the building or repairing of Hadrian's Wall, though there it was drawn mainly, if not wholly, from tribal communities in the southern part of the province.

² *The Roman Wall in Scotland*, p. 27

³ Captives figure in the symbolic sculptures commemorating the campaign with which the legionaries decorated some of their 'distance slabs' (Macdonald, *The Roman Wall in Scotland*, Pls lxiv, 1, and lxxii, 6) Cf S H A, *Vit. Ant. Pii*, 5, 4 *Britannos per Lollium Urbicum victi legatum alio muro respiticio summotis barbaris ducto*, where the words *summotis barbaris*, if verbally an echo of Tacitus' phrase in *Agric.* 23, may have a different meaning and may refer to deportation. In any case a deportation of Britons to Germany about this time is amply proved by epigraphic evidence (*CIL*, xiii, 6490, 6514, etc.) Much has been written in Germany on the subject of these *Brittones* since Ernst Fabricius drew attention to it in *Ein Limesproblem* (*Festschrift der Universität Freiburg*, 1902).

and the moving forward of the frontier from Hadrian's Wall to the Forth-Clyde line. But it would seem that the building of the Antonine Wall was connected not only with their deportation to Germany but with the character of the work they did there. Their buildings and commemorative slabs, distinguished by the excellence of their workmanship from other work of the period on the German Limes, are closely akin in structural technique and ornamentation to contemporary legionary work in Britain, and particularly to the stonework of the forts and to the sculptured monuments of the Antonine Wall system.¹ Apparently these Britons had had instruction from the legionaries engaged upon the Wall. With competent instructors available on the German Limes, it is hardly likely that legionaries in Britain would be detached from their units to accompany the deported natives to Germany merely to ensure that their work there should be in the British legionary style. It seems more probable that the Britons had served their apprenticeship before they left Britain by assisting in the building of the Antonine Wall and its forts. Possibly we have a piece of evidence for this in Sibbald's reading of the letters BRITTON on a fragment of an inscribed stone from Castlecary. The stone is now lost, but it did not disappear before Sibbald's reading had been confirmed by Horsley.²

From the disposition of the troops on the southern part of the German Limes it has been inferred that the Britons there were regarded for a time as likely to give trouble. However that may be, there can be no doubt that they would require careful watching when first impressed if put to work in their own country. This would be especially true of any natives employed on the western end of the Wall, where they might support hostile elements screened by the Kilpatrick Hills, or, if they contrived to escape, could put themselves immediately beyond reach of recapture.

But the danger threatened by the proximity of the Kilpatrick Hills

¹ Drexel, 'Bauten und Denkmäler der Brittonen am Limes', *Germania*, vi (1922), pp 31-7.

² *C.I.L.*, vii, 1094, Sibbald, *Hist. Inq.*, p 48, Horsley, *Brit Rom.*, p. 201. Horsley claims that his copy was 'taken with care from the original and the first word is plainly BRITTON.' According to him, the fragment was the lower part of an altar. An altar is more likely to have been set up by a garrison (or its commander) than by a transient working-party. On the other hand, it is not probable that *Brittones* were stationed at Castlecary as soldiers.

would be quite enough of itself to make the legionary working-parties on the Wall keep in close touch with one another, and if it is possible that the danger was aggravated by the presence of unreliable native labour, it is certain that the deportation of the *Brittones* to Germany would make much of southern Scotland comparatively safe. This may help to explain the system by which the western road was patrolled.

Along the 36 miles of road between the cohort-fort of Birrens and the small fort at Crawford, all the permanent stations of Antonine date known to us are small posts, of which the fully excavated example at Milton, with its interior area of one-fifth of an acre, may be taken as the type. The small earthwork at Fairholm, 7 miles from Birrens, was probably one of them, the post at Milton lies about 13 miles further north, and there is one at Redshaw Burn, 9 miles beyond Milton and 7 miles south of Crawford. The disproportionate distance between Fairholm and Milton would be divided into two fairly equal intervals if we could suppose that the earthwork at Dalmakethar, in spite of the un-Roman features which it presents as it stands, had originated as one of the series, as would suit its size and its relation to the Roman road, but at present that is no more than a conjecture (p. 196).

The 'redoubt' at Burnswark, which existed as an independent work before the construction of the 'south camp' in which it is incorporated, was regarded by the Commissioners on Ancient Monuments as of native origin,¹ but more recently it has been taken to be a Roman work of the Milton type,² as suits its size and shape. That men of the Birrens garrison would be detailed for signalling duty on Burnswark Hill, three miles from their fort, seems certain. Birrens is well placed to control the region of the lower Annan and the natural lines of movement converging upon the upper end of the Solway, but the site is ill suited for long-distance signalling, and it is difficult to believe that at any period the garrison there would fail to take advantage of the exceptional

¹ Royal Commission's *Inventory of Ancient Monuments in the County of Dumfries*, No. 272, pp. 97, 99-100.

² *Antiquity*, xiii (1939), p. 282, cf. above, p. 97.

opportunity afforded by the summit of Burnswark Hill,¹ which is within sight of the fort and commands a very wide prospect both north and south; and the 'redoubt' occupies a comparatively sheltered position at the foot of the slope giving the easiest access to the summit. But even if it be Roman, the work has little claim to be admitted a regular member of the series of small posts between Birrens and Crawford. There is one feature in particular which distinguishes it from the proved members of the series: it lies nearly a third of a mile from the road, whereas they are closely connected with it, as if this was essential to their purpose.

At Fairholm the earthwork seems to have adjoined the road, though the exact relation between the two is uncertain. At Redshaw Burn, and at Durisdeer, which belonged to a connected system, the road passed alongside, while at Milton, where a road had been laid out at some distance to the east of the site later occupied by the small earthwork, it was diverted, or a loop run from it, or an existing by-pass modified, to give immediate connection. The single gateway, where located, is in the side facing the road, except at Durisdeer, where the nature of the ground made this arrangement inconvenient.

The close relation of these small posts to the road justifies Mr. Clarke's view that they had served as stations for road patrols and convoys, while Mr. St. Joseph emphasizes the part they would play in the signalling system. But these were among the functions performed by forts, and Mr. St. Joseph distinguishes the small posts as 'fortlets' from the

¹ As the garrison of the outpost to Hadrian's Wall at Bewcastle, where the fort was placed on the site most suitable tactically, maintained a signalling service on the southern slope of Gillalees, a few miles distant (Richmond, *Cumberland and Westmorland Trans.*, N S, xxxviii (1938), pp. 195-8).

In the small collection from Burnswark deposited in the National Museum, Edinburgh, after the excavations of 1898, when the 'redoubt' was the only part of the site that was completely uncovered, one or two pieces of pottery of Antonine date have been noted (*Journal of Roman Studies*, xxi (1931), pp. 217-8), and two coins of Trajan recorded as having been found there (Macdonald, *Proc. Soc. Ant. Scot.*, lii (1917-8), pp. 216-7) were probably dropped at that time. A use of some part of the site in the Antonine period continuous or frequent enough to leave pottery and coins behind it, if these belonged to Roman troops and not to natives, can only have been of a kind subsidiary to the occupation of Birrens, where, only three miles away, there was a military fort throughout that period.

ordinary signalling-stations. The description of them as small forts is fully borne out by the character of their defences and by the fact that they appear to have been entrusted with the patrolling of nearly forty miles of road.

That these posts would be manned from an adjoining cohort-fort can be inferred from their small size and from what we learn of their interior accommodation from the excavations of Mr. Clarke at Milton and Durisdeer. At the same time the length of road they covered precludes the possibility that they would be manned on a system of short-period reliefs; their garrisons, small as they were, must have been more permanent than that. It is indeed possible that further excavation of the small fort at Crawford, which, with an interior area of 1.6 acres, is seven or eight times the size of the posts to the south of it and yet affords decidedly less than the space normally allowed (even on the stinted British scale) to a *cohors quingenaria*, might show that, in its final form at least, it was intended for a cohort of which a proportion of the men would always be detached for duty at the neighbouring patrol-posts—an arrangement for which parallels are not lacking in other frontier areas. In any case a series of small permanent stations manned by detachments from an adjoining cohort-fort would present us with a minor variety of those regional commands which are recognizable in various forms in the Roman frontier system. But it would be a variety of a rather distinctive kind. The small works that supplemented the forts on and behind the German and other *limites*, and here and there on various roads between the Walls in Britain, offer no real analogy with the continuous series of posts in Annandale and upper Clydesdale, which did not supplement but replaced the use of forts for nearly forty miles of road running through newly occupied or reoccupied country.

That it was in the Antonine period that the system was adopted seems fairly certain. The post at Redshaw Burn is known only from its surface remains, and at Fairholm Mr. St. Joseph's trial trenches produced no objects, but at Milton a substantial collection came from Mr. Clarke's excavation of the small earthwork, and here the datable finds were uniformly Antonine. It is a probable inference that all three posts were of Antonine origin, for their homogeneous character and their distribution imply that they composed a connected series. The similar earthwork at Durisdeer

was certainly of Antonine date, as Mr. Clarke's excavations have proved.

The number of the posts and therefore the intervals between them are still uncertain, but it is obvious that their use was an economy. It is not the only evidence we have for an economy of troops in the Antonine period. In spite of the more or less complete evacuation of the auxiliary forts in Wales, there must have been great difficulty in finding garrisons for the extension of the frontier zone from the Tyne-Solway line to Forth and Clyde. Even on the Wall, the focus of the Antonine system in Scotland, some of the forts, as has often been pointed out, are too small to have housed the full strength of the units associated with them by inscriptions. Much more would one expect an economy of troops in the region between the Walls, for the concentration on the isthmus, if directed primarily against the Caledonians beyond, would serve also, on the Agricola principle, to 'contain the whole tract of country to the south'; and this would be the main field from which the natives deported to Germany would be drawn. It may be noted as a mark of the confidence of the Roman military authority that, though Hadrian's Wall did not altogether cease to be garrisoned, the gateways through the Wall at the milecastles were thrown open.

In these circumstances it cannot be taken for granted that the series of small posts between Birrens and Crawford implies that the Nithsdale system, which covered the western flank of the road along just that stretch of it, was included from the beginning in the Antonine scheme. The persistence of native hostility both south and north of Hadrian's Wall had been underestimated, and it is possible that the Nithsdale system, so far from being a reason why Annandale and upper Clydesdale were lightly held in the Antonine period, may have been laid out after events proved that the series of small posts was by itself insufficient.

That the Nithsdale system was in existence during part at least of the Antonine period is proved by the evidence of the datable objects from Carzield and Durisdeer. At that time it would afford a route to upper Clydesdale alternative to that by Annandale, and would protect the lightly held Annandale route by enclosing and penetrating the hill country on its

western flank ; the cavalry fort at Carzield, which seems to have been the centre of the system, would combine with the fort at Birrens to control landward movement from Galloway (see also Pref. p. viii), Nithsdale, and Annandale upon the eastern end of the Solway and the southern Wall, while the fort on Ward Law, perhaps with some policing craft stationed at an adjoining harbour, would co-operate with the stations on the Cumberland coast (see pp. 120, 198) in preventing the outflanking of the Wall-system by movement across the Firth. One would expect a system which served these purposes to have been part of the original Antonine design, especially if it was included, as it now seems to have been (Pref. pp. viii-ix), in the Flavian scheme, which the Antonine occupation, as far as it went, followed so closely. This south-western region, indeed, may have given the immediate occasion for the Antonine advance into Scotland. About that time Nithsdale and western Galloway seem to have been one of the areas in southern Scotland most thickly beset with native forts, by sea the region was within easy reach from Ireland ; by land it was not, like the central part of the Southern Uplands, cut off from the Hadrianic Wall-system by the Cheviot range, and the Solway Firth was easily crossed by boat. If the decision of Pius to enclose within the province the land between Tyne-Solway and Forth-Clyde was provoked by an experience or anticipation of trouble from southern Scotland, the trouble, or the threat of it, may well have come from the south-west.

If the laying down of the Nithsdale system means, as it well may, that there had been actual aggression¹ from that region, Horsley² may possibly have been right in following Casaubon in connecting the passage in the *Historia Augusta*³ relating to the campaign of Lollius Urbicus and the building of the Wall of Pius with an allusion in Pausanias to trouble with the Brigantes. Pausanias is giving instances to show that the wars of Pius were defensive, and we are told that he 'deprived the Brigantes

¹ At Birrens signs of 'destruction by fire' have been noted in the Hadrianic fort (Birley, *Proc. Soc. Ant. Scot.*, lxxii (1937-8), p. 293). This might be significant for the circumstances preceding 142, if the building of its Antonine successor dates from that time, as Macdonald suggested (*ibid.*, lxxiii (1938-9), p. 266).

² *Brit. Rom.*, pp. 51-2.

³ *Vit. Ant. Pii*, 5, 4, cited above, p. 216, n. 3.

in Britain also of the greater part of their territory because they too had taken the offensive by armed raiding into the Genounian part, which is subject to the Romans.¹ How, it has been asked, could aggression by Brigantes, whose territory 'does not appear to have extended much beyond the present border between England and Scotland . . . have had as its immediate consequence the building of a wall across the Forth and Clyde isthmus?'² The existence of the Nithsdale system as we now know it suggests a modification of the terms of the question and a possible answer to it. On the west, the territory of the Brigantes seems to have extended at least as far as lower Annandale, for a statuette was dedicated to their eponymous deity at Birrens.³ Birrens, however, was included in the outpost system of Hadrian's Wall, whereas the context and terms of Pausanias' allusion make it clear that he is referring to 'Brigantes' living outside the occupied area. The Brigantian name would not be much misapplied, if misapplied at all, if it was extended to the natives of the whole of Annandale and their neighbours in Nithsdale, and therefore there would be some justification for seeing a correspondence between the allusion in Pausanias and the circumstances of 142, if it was aggressive action from that quarter that gave the immediate occasion for the annexation of southern Scotland. Not that the correspondence would be complete even then, for, if the source of the trouble, as thus localized, could be described as Brigantian, that name, even if loosely used, could hardly apply to the whole of the extensive territory then annexed. Such a view, however, of the circumstances preceding the Antonine advance into Scotland would not depend upon a correspondence with the passage in Pausanias the strong hold maintained upon lower Nithsdale (see also Pref. p. viii) would in itself be a ground for it. It would, however, require that the occupation of Nithsdale was an original part of the Antonine scheme. Though probable, that is not yet proved, and indeed there is a little evidence pointing to the possibility that that area may have been occupied as the result of a disturbance which broke out more

¹ *Descript Graec*, viii, 43, 4 The 'Genounian part' (if the text is sound) is not mentioned elsewhere

² Macdonald, *The Roman Wall in Scotland*, pp 9-10

³ *CIL*, vii, 1062. Normally, such local cults did not long survive transplantation, and all the other known dedications to Brigantia come from sites which certainly lay within Brigantian territory.

than ten years later, an occasion to which, as it happens, the allusion in Pausanias is now usually referred.

In 1903 there was recovered from the bed of the Tyne at Newcastle an inscription which proved that in the governorship of Julius Verus the legions in Britain had to be reinforced by special drafts from Lower and Upper Germany. This was at once connected by Haverfield with an inscription from Birrens recording the restoration of the fort there under Julius Verus in 158, and with two other building-inscriptions erected under the same governor, one from the neighbouring fort at Netherby, in Cumberland, and one as far away as Brough, in Derbyshire¹ With this epigraphic evidence he associated the passage from Pausanias and inferred that the series of restorations under Julius Verus had been occasioned by a revolt extending over the whole Brigantian territory.² Macdonald later suggested that bronze issues of 155 bearing the type of Britain subdued 'may be commemorative of the first decisive success' in the suppression of the revolt, 'while the building or rebuilding of permanent forts marks the final stage in the long and troublesome task of pacification.'³

The evidence for destruction in Annandale at this time has now been extended to twenty miles north of Birrens. At Milton Mr. Clarke's excavations have proved that the interior of the little post there had to be completely restored at one time, and this must have been in the Antonine period, to which the finds show its occupation to have been confined. Presumably, then, the disaster which gave occasion for the restoration would be due to the same movement as affected Netherby and Birrens.

On the other hand, when we move west of Annandale, the marks of destruction and restoration, so obvious at Birrens and Milton, become uncertain or disappear. At Carzield a change of road-level was noted at one point,⁴ but there were no such signs of reconstruction as were to be

¹ In 1908 another Verus stone, read by Mr. I. A. Richmond as a dedication to Mars Ultor (*Arch. Ael.*, 4th Ser., xxi (1943), pp. 177-9), was found at Corbridge

² *Arch. Ael.*, N.S., xxv (1904), pp. 140 ff., and *Proc. Soc. Ant. Scot.*, xxxviii (1903-4), pp. 454 ff.

³ *The Roman Wall in Scotland*, 1st ed. (1911), p. 10; 2nd ed. (1934), p. 11.

⁴ Birley and Richmond, *Dumfriesshire and Galloway Trans.*, 3rd Ser., xxii (1942), p. 158

expected (in an excavation which cut through the defences at half-a-dozen points as well as exploring part of the interior) if the history of the fort had been the same as that of the fort at Birrens. There is a corresponding contrast between the small posts at Milton and Durisdeer: at Durisdeer 'the overlapping of some of the post-holes, along with differences of size and irregularity of spacing,' indicated alteration or repair, but there was nothing comparable with the successive levels throughout the interior of the Milton work. Yet these outlying stations at Carzield and Durisdeer could not have escaped the fate that befell Birrens and Milton about 155, if they were in existence at that time. If they were, the conclusion (on our present evidence) would be that they were given up at that time and never reoccupied.¹ It seems improbable, however, that in such circumstances the Annandale system would have been restored unchanged, as the evidence from Milton appears to show it was, as a series of small posts. The alternative is to suppose that the Nithsdale stations were not built until the trouble was over. This would give a reasonable reconstruction of events. It would mean that in the wrecking of Milton and Birrens, and perhaps of Netherby, about 155, the native population west of the Annan, encouraged, it may be, by the weak hold maintained upon Annandale, had taken an active part, and that, when Julius Verus repaired the damage in 158, he took the precaution to cover the small posts in Annandale, as by a great bastion, by a system of forts and roads projecting into Nithsdale.

Such a view would offer a possible solution of a difficulty which embarrassed Haverfield when he connected the epigraphic evidence for rebuilding from Brough to Birrens with the passage in Pausanias. Pausanias' 'Brigantes' had been deprived of 'the greater part of their territory' because they had raided 'the . . . part subject to the Romans.' That could not be said of natives living between Brough and Birrens, for the whole of that area was then in Roman occupation.² Nor could it

¹ So Birley and Gillam, *ibid*, xxiv (1947), pp 70, 77-8

² Haverfield suggested, with hesitation, that the annexation of territory might mean no more than that the rebellious provincials were deprived of such civil autonomy as their local communities had hitherto been allowed (*Proc. Soc. Ant. Scot.*, xxxviii (1903-4), p. 457) But the context and terms of Pausanias' allusion seem to make it impossible that the reference can be to a measure of that kind.

well apply to natives between the Walls from Annandale eastwards, for in 155 that region also was effectively 'subject to the Romans'. But though at that time the province would theoretically be considered to include the whole region between the Walls from sea to sea, the natives west of Annandale might, in fact, satisfy the terms of Pausanias' allusion if Nithsdale, which, as we have seen, might well have been treated by him as an outlying part of the Brigantian territory, still lay outside the occupied area about 155 and was included within it about 158. Nor would this view be inconsistent with Haverfield's inference from the epigraphic evidence that the movement had extended over the whole of the Brigantian country: it would merely mean that Pausanias, for the immediate purpose of his argument, was concerned with a part of it that could be described as aggression from outside.

But while a movement extending from northern England to lower Annandale, and from there into Nithsdale, might still be reasonably described as Brigantian, the great bulk of the evidence for destruction and restoration during the Antonine period comes from areas that lay definitely beyond the limits of the Brigantian territory: from Cappuck and Newstead, both in a region where Ptolemy places the Selgovae and cut off from the Brigantes by the Cheviot range, from the distant forts on the Antonine Wall; and now from the intermediate point at Castledykes, where Miss Robertson's examination of the defences and of the adjacent parts of the interior produced evidence from all three sides examined that there had been a radical reconstruction during the Antonine occupation.¹ This gives a link between Newstead and the Wall-forts, making the evidence continuous over an area extending from the *limes* confronting the Caledonians to the base fort in the country of the Selgovae, which differs from lower Annandale in its detachment from the Brigantian territory.

A disaster affecting an area so delimited would come, not from natives south of Hadrian's Wall, but from the tribes of southern and especially central Scotland. If so, the most obvious occasion for it offered by the ancient historians would be the overrunning of the frontier early in the

¹ We now have similar evidence from another intermediate point—the Antonine fort at Inveresk, for which see below, pp 233-4. For a possible indication of reconstruction at this time at Bothwellhaugh see p 187.

reign of Commodus which Cassius Dio¹ describes as a serious disaster. But the record of coin-finds seemed to Macdonald to impose the view that the Antonine occupation came to an end during, or very soon after, that disturbance (pp. 231-2), and he dated the preceding destruction and restoration of the forts throughout Scotland by the bronze issues commemorating military action in 155 and especially by the inscription recording the reconstruction of the fort at Birrens in 158. This brought the Scottish evidence into relation with the Verus inscriptions found elsewhere in Brigantian territory, and so with the passage in Pausanias as applied by Haverfield.

But with all the Scottish material attached to it, the archaeological evidence for Pausanias' Brigantian movement became strangely lop-sided. The evidence as a whole now seemed to hang so ill together that the suggestion was made that it covered two events with little or no connection with one another—'a local raid' from the Pennines and a 'frontier war'.² To the description of the Brigantian movement as 'a local raid' Macdonald objected that the context of the passage in Pausanias implies that it was regarded as a serious matter,³ and for that reason he considered himself justified in attaching to it the destruction of the forts on the Antonine Wall. He would only have substituted one difficulty for another if he had supposed that Pausanias was using the name of the Brigantes so loosely as to include the natives of southern and central Scotland, for, in the mid-Antonine period, these would not fit into the other terms of the allusion. Actually, Macdonald assumed that Pausanias was using the Brigantian name with some precision, and his view apparently was that a revolt extending from Derbyshire to the Annan had encouraged an attack upon the Scottish Wall by the tribes in its neighbourhood. But on this view we still get two different, if vaguely connected, movements—a Brigantian revolt and a frontier war, though Macdonald would not accept the expression 'a frontier war', which drew attention to a difficulty of which he was conscious. The difficulty is that, if the context in which Pausanias mentions the Brigantian movement implies that this was a serious matter, it also makes it unlikely that there was

¹ Dio, lxxii, 8. See below p. 231.

² Birley, *Arch. Ael.*, 4th Ser., vii (1930), p. 172.

³ *Ibid.*, viii (1931), p. 10.

anything like a frontier war going on at the same time. He would hardly have selected a Brigantian movement, however serious, as his example of native aggression against a 'part subject to the Romans' if the Antonine Wall had collapsed under native pressure.¹

But to bring out the full force of the difficulty it ought to be stated more generally. If the great concentration of troops upon the isthmus was overwhelmed, it was the most serious, indeed the only serious, military disaster of the reign of Pius, and one hardly less memorable than that which was to befall the Limes in the early part of the reign of Commodus. The disaster in the reign of Commodus was recorded by Cassius Dio with sufficient emphasis to retain a prominent place in the abridgment of Xiphilinus, and it is alluded to in the only other surviving source where mention of it was to be expected.² But of such a disaster in the reign of Pius the historical tradition preserves no record,³ for even Pausanias, a contemporary, seeking examples of native aggression and alluding (as Macdonald himself supposed) to this very occasion, knows of nothing but a Brigantian movement. How could a Brigantian movement which did little or no damage on Hadrian's Wall⁴ and comparatively little elsewhere in Brigantian territory (so far as is known) have left an unrecorded trail of destruction along the Antonine Wall and through southern Scotland?

There is one circumstance which might seem at first sight to aggravate the disproportion between the Scottish and the Brigantian evidence for a disturbance described as caused by Brigantes but which may in reality so link the two together as to make them mutually explanatory and consistent with the historical tradition. It is the fact, clearly implied by the condition of the forts and by changes of garrison, that the Antonine Wall and all southern Scotland were temporarily evacuated. This need not mean that the powerful force stationed on the Wall had been unable to maintain itself against the northern tribes. When Hadrian's Wall was overrun at the end of the century, the garrison, or the bulk of it, had previously been

¹ The point is made by Macdonald himself (*loc cit*), but it tells against his own view as interpreted above.

² S.H.A., *Vit Comm Ant*, 13, 5.

³ S.H.A., *Vit. M Ant Phil.*, 8, 7-8, and 22, 1, are not relevant here. See below, p. 230.

⁴ *C.I.L.*, vii, 563, records some repair done on the Wall in 158, apparently between Benwell and Rudchester.

withdrawn to the Continent by Clodius Albinus to support his claim to the throne. With or without the allusion in Pausanias, the evidence of rebuilding from Derbyshire to Annandale would offer reasonable ground for supposing that about 155 the troops in Scotland may have had to be hurriedly withdrawn,¹ if only for their own safety, to help to suppress a rising in their rear which the depleted garrison there, further weakened perhaps by disaffection,² could not be trusted to deal with by itself. That reinforcements were urgently required we know from the Newcastle inscription, but the special drafts there referred to as having been sent from the German provinces to the legions in Britain did not arrive until Julius Verus was governor, and his term of office does not seem to have begun till 157, whereas the numismatic evidence indicates that the trouble was considered to be in hand by 155. The first call may have been upon the troops in Scotland, the only large force then available in Britain itself outside the affected area.

If the troops in Scotland were hurriedly moved south to deal with a Brigantian rising, it would not be long before it was suppressed, and this would explain why, dangerous as it was, it appears to have caused comparatively little damage within the area immediately affected. It would also explain the extent of the destruction done outside that area if the troops in Scotland evacuated their stations, these could be looted and wrecked at will by the natives. In such circumstances the silence of the historians about any frontier war or military disaster would be explicable, since there would be nothing of the kind to record. But there would be an immense amount of damage to repair, most of it in Scotland. To take their share in this work and, probably, to supply garrisons for some of the restored forts,³ the legions in Britain would have to be at full strength.

¹ The same suggestion was made by Collingwood, *Journal of Roman Studies*, xxvi (1936) p. 86.

² Cf W. Weber, *Cambridge Ancient History*, xi, p. 337, on the evidence of coins of the 'Loyalty of the Army' type. For issues of this type in bronze and silver in 155-6, see Mattingly and Sydenham, *The Roman Imperial Coinage*, iii, p. 141, No. 926, p. 143, No. 939, and p. 144, No. 949.

³ It was suggested by Macdonald (*The Roman Wall in Scotland*, pp. 403-4) that some of the inscribed stones proving the presence of legionary detachments at certain of the Wall-forts, whether as builders or garrisons, may not be contemporary with the original construction of the Limes.

It may have been for this reason, especially if disaffected elements had to be replaced, that the drafts of legionaries were sent from the German provinces in the governorship of Julius Verus, under whom the work of restoration, at least in the Brigantian country, was carried out.

Even if the passage in Pausanias were restored to its former place as an allusion to the events of 142, there would remain the issue of coins of the type of 'Britain subdued' in 155, the restoration of forts from Brough to Birrens about 158, and the landing of legionary reinforcements from the Continent at Newcastle about the same time, as a body of facts to which to attach, in the absence of any historical record of a disastrous war with the Scottish tribes, the destruction of the forts on the Antonine Wall and of the supporting forts to the south of it. But with or without the difficult testimony of Pausanias, there is the problem, of which a solution has been discussed above, of giving a reasonable explanation of how this wholesale destruction in Scotland could have been occasioned by a Brigantian disturbance. As this disturbance is the only occasion that has been put forward as adequate to account for the break in the Antonine occupation of Scotland consistently with the view, based on the coin evidence, that the occupation came to an end early in the reign of Commodus, a satisfactory solution of the problem has an obvious importance for that system of chronology.

If the destruction of the Antonine forts in Scotland dates from about 155, the mischief had already been done before the 'war threatened in Britain' which we are told Calpurnius Agricola was sent out to deal with,¹ for this was in the reign of Marcus Aurelius, in 161 or 162. But signs of unrest at this time would fit in readily enough with the view that the destruction of the Scottish forts and the evacuation it implies had occurred a few years before: some trouble might reasonably be supposed to have arisen when the evacuated area was reoccupied, especially if it was now that effective occupation was first extended into Nithsdale. Birrens, we know, was rebuilt in 158, but Birrens, like Netherby, was closely connected with Hadrian's Wall. The Antonine Wall and its

¹ S.H.A., *Vit. M. Ant. Phil.*, 8, 7 f. . *Imminebat etiam Britannicum bellum . . . et adversus Britanos quidem Calpurnius Agricola missus est.*

supporting forts may not have been reoccupied until a few years later. After the experience of the Brigantian revolt, there may well have been some delay and hesitation about re-extending the frontier zone as far north as the isthmus of the Forth and Clyde.

That the system hardly outlasted the reign of Marcus was the conclusion drawn by Haverfield in 1899¹ from the evidence of the Roman coins found in Scotland, especially those from Roman sites (with Cramond excepted as a special case). Since Haverfield wrote, the list of Roman sites from which such finds have been recorded has almost doubled, and the record now includes the large addition of some 260 identifiable pieces from Newstead, and this evidence has been supplemented by numerous collections of datable pottery. Though the Society's recent excavations have produced very little in the way of coins,² substantial contributions to the datable pottery have come from Milton, Durisdeer, Loudoun Hill, and especially Castledykes. In this accumulation of datable objects, and of records of such objects, over the last fifty years nothing has appeared which is inconsistent with Haverfield's conclusion.

On the negative side this evidence is strong in itself, and it acquires greater force when it is looked at in its positive aspect and in relation to other forms of evidence. It is then seen as a stream of datable material running on continuously into the early years of the reign of Commodus, when its cessation coincides with a native movement which called for military action on such a scale as to be commemorated by repeated coin-issues in 184, 185 and 186, and by the assumption by Commodus in 184 of the title 'Britannicus', and to figure in the historical tradition as 'the greatest of his wars'. 'The tribes in the island', we are told, 'having crossed the wall that separated them from the Roman encampments, proceeded to do great damage, and slew a general with the troops under his command'; whereupon 'Commodus in alarm sent Ulpius Marcellus

¹ The Society's *Antonine Wall Report*, pp. 157-66.

² A much corroded 'second brass' of Vespasian from Durisdeer, a *dupondius* of Hadrian, 'fairly well worn', from Castledykes, and another *dupondius* from the same site, possibly also of Hadrian but too much corroded to be identified with any certainty. For two *denarii* of Domitian found at Loudoun Hill in 1948, see above, p. 212, n. 1.

difficulty, discussed above, of fitting a break in the occupation about 155 into the historical tradition, but also a difficulty that besets any view which regards the third occupation of the isthmus as a third period of the Antonine Wall-system.

The evidence from the forts leaves little room for doubt now that after 142 the isthmus was twice evacuated and twice reoccupied. It also indicates that the second restoration was of a less complete and more perfunctory kind than the first, implying that the third occupation there was a brief and provisional one. In the second edition of his *Roman Wall in Scotland* Macdonald adopted the view that there was a restoration of the Wall-system by Ulpian Marcellus and applied it to explain this third occupation, but he modified it to suit the perfunctory character of the structural work and the negative evidence of the coins by adding that the forts were recovered and repaired 'only to be definitely relinquished a year or two later.'¹ This explanation does not so impose itself as to be able to dispense with evidence other than the restoration which it offers to account for, and though it might reasonably plead that so short-lived an achievement by Marcellus would naturally be ignored by Dio, it does not receive there any positive support. Nor is the view that the second restoration on the isthmus was a renewal of the Antonine Wall-system, whether for a decade or merely for a year or two, easy to reconcile with the present evidence of the forts to the south of it.

Opinions differ about the history of the fort of Birrens, but it is agreed that during the Antonine occupation there was only one reconstruction there²—that carried out by Julius Verus in 158, with which Macdonald correlated the first restoration of the forts on the isthmus, nor does the small Antonine post at Milton seem to have been restored more than once. This is true also of the Antonine fort at Newstead, and now Miss Robertson's careful examination of the defences of the corresponding fort at Castledykes and Mr. I. A. Richmond's excavations on

¹ *The Roman Wall in Scotland*, p. 479.

² Birley, *Proc. Soc. Ant. Scot.*, lxxii (1937-8), pp. 346-7; Macdonald, *ibid.*, lxxiii (1938-9), p. 266.

the site of the Antonine fort at Inveresk have given the same result.¹ The evidence of Castledykes and Inveresk is of particular value because it confronts the two restorations on the isthmus closely with the single restoration of the forts of southern Scotland.

On structural grounds there is good reason to suppose that at Castledykes, Inveresk and Newstead the single restoration corresponds to the first of the two restorations on the isthmus. Either, then, the second (and last) occupation of these forts covered the second and third occupations of the isthmus, or it closed with the end of the second occupation there and all three forts lay derelict while the isthmus was reoccupied for its brief third period. The first alternative would imply that the second occupation of the forts south of the isthmus passed undisturbed by a disaster which divided the corresponding period on the Wall into two occupations separated by an interval of abandonment. But though Newstead, some fifty miles to the south and cut off by a screen of hill country, might not unreasonably be supposed to have been unaffected by a disaster which laid the Wall-forts in ruins but does not appear to have reached Birrens, it seems much less probable that Inveresk, on the Firth of Forth, and Castledykes, only half as far as Newstead from the Wall and closely connected with the isthmus by the valley of the Clyde, should have continued to be held when the isthmus was evacuated and overrun, however short we suppose the interval to have been before the Wall-system was restored.

The alternative (it has been said) is that the end of the second (and last) period of Castledykes, Inveresk and Newstead coincided with the end of the second period of the Wall, and that these forts were not included in the restoration which introduced a third occupation of the isthmus. It seems impossible to reconcile this with any view that presents the third occupation of the isthmus as a continuation or renewal, however brief, of the Antonine Wall-system, for that system had been maintained by lines of southward communication on which Newstead and Castledykes were

¹ For Inveresk see Mr. Richmond's account of his recent excavations there, to be published in *Proc. Soc. Ant. Scot*. The view that there were only two (not three) periods of Antonine occupation at Newstead, put forward by Mr. Richmond over twenty years ago, has now been confirmed by him by test trenches (September 1947). the results of which will be published in the same *Proceedings*.

essential points. If ever there was a brief occupation of the isthmus without any communication by land with the southern part of the frontier zone, it can only have been a temporary arrangement based upon the sea. As it happens, the station on the Firth of Forth at Cramond seems to have played an active part during the Caledonian campaign of Severus in 209, and the possibility cannot be ignored that the brief third occupation of the isthmus may have had something to do with that episode.

THE PROBLEM OF THE SEVERAN OCCUPATION¹

An occupation of Cramond in the early third century is proved by the numerous coins of Severus and his family recorded as having been found on the site.² At present it is the only site in Scotland for which there is convincing evidence of Roman occupation at that date. On various grounds it is reasonable to suppose that there would be a Severan fort at Birrens, but it cannot be said that the reopening in 1936-7³ of the site excavated in 1895 did much to encourage the belief that it took the form of a restoration of the second-century work;⁴ and the two fort-like enclosures to the west of this work both appear to be earlier than it (p. 209). But the nature and chronology of the various works at Birrens as known from recent air-observation can be determined only by an extensive scheme of excavation, to which an appropriate supplement would be an adequate exploration of the complex of works on Burnswark, especially the 'south camp', which incorporated the 'redoubt' (pp. 218-19) and can hardly have been laid out while the second-century fort at Birrens, only some three miles away, was occupied.

If future excavation should prove that there was a fort at Birrens in the early third century, it would belong, apparently, to the history of the outpost system of Hadrian's Wall rather than to the history of the brief Severan occupation of Scotland. There are no signs of this occupation further north along the route through Annandale and upper

¹ For recent discussions see Birley, *Proc. Soc. Ant. Scot.*, lxxii (1937-8), pp. 363-4, and Miller, *Cambridge Ancient History*, xii, p. 40.

² Macdonald, *Proc. Soc. Ant. Scot.*, li (1917-8), pp. 213-6.

³ Birley, *Proc. Soc. Ant. Scot.*, lxxii (1937-8), pp. 275-347.

⁴ For a negative view see Macdonald, *ibid.*, lxxiii (1938-9), pp. 254-72.

Clydesdale, or to the west of it. The datable finds at Carzield and Durisdeer were wholly Antonine. On the route itself, the site at Milton was considered important enough to be selected for occupation at two periods, but the later of the two, that represented by the small post, was Antonine. There is nothing, therefore, to show that Severus reached Cramond from the west.

At Castledykes there is the same absence of finds of Severan date as at Newstead, with which its position on the road-system connected it. The negative evidence of Newstead, confirmed by the abrupt cessation of all remains of the early third century on Dere Street the moment the Street passes beyond the outposts to Hadrian's Wall, seems to preclude the use by Severus, not only of the route to the western end of the isthmus by Castledykes, but, what is more important, of the eastern route to the Firth of Forth at Cramond.

We now have evidence from all the three main routes that ran through southern Scotland, and none of them gives a hint that troops of Severus passed that way, there are neither datable objects that can be associated with his campaigns nor any structural remains later than those corresponding to the first of the two restorations on the isthmus. It is true that little is known about the dates of the temporary marching-camps along these routes, but unless we suppose that Severus marched to the isthmus without leaving any garrisons to hold his line (or lines) of communication, we can only infer that he did not reach it by land. By three routes, therefore, we are brought to the conclusion which Haverfield arrived at by way of Newstead—that Severus, for his Caledonian campaign of 209, transported his army to the Firth of Forth by sea¹ This agrees well with the coin evidence from Cramond, where the number of issues of Severus and his family seems to indicate an activity in this region greater than was to be expected from a brief occupation of a normal kind.

Dio tells us that after the Caledonian campaign Severus 'compelled the Britons to come to terms on the condition that they ceded no small extent of territory', and that, after his death in 211, Caracalla 'made

¹ *Edinburgh Review*, cccxiii (1911), p. 487, and *The Roman Occupation of Britain*, p. 123. More decidedly, Macdonald, *Proc. Soc. Anti Scot.*, lii (1917-8), p. 252-3. See also Miller, *The Cambridge Ancient History*, xii, p. 40. Cf. Richmond, *Arch. Ael.*, 4th Ser., xi (1934), pp. 98-9.

peace with the enemy, withdrew from their territory, and evacuated the forts.¹ From the context one would infer that the arrangement forced upon the Britons would be intended to keep the Caledonians in check, and it is therefore a reasonable interpretation of Dio's narrative to suppose that the ceded territory would extend as far north as the estuaries of the Forth and Clyde, beyond which the Caledonians lived, and that the forts to which he refers, or some of them, would lie across the natural line of the isthmus.

The narrative of Dio thus suggests that inquiry from the fixed point at Cramond should direct itself not only northwards, east of the mountain zone, but also westwards across the isthmus ; and in itself it is a reasonable assumption that Severus, especially as he appears to have been operating from a base on the Firth of Forth, would not neglect to secure this *angustum terrarum spatium*, the strategical importance of which, obvious enough in itself, would be impressed upon him by the example of Agricola and by the visible remains of the Antonine system. As these different precedents suggest, the isthmus would be a natural line for him to occupy whether as a temporary measure to secure his rear while campaigning in the north or as a means of permanent control. It need not be assumed, because his legate had been content to restore the Hadrianic Wall-system, that the Emperor himself had not a larger plan in mind when (or after) he crossed to Britain. Indeed Dio tells us that he intended to subjugate the whole island.² Whatever his design was, it was cut short by his death at York in February 211, when he was preparing for a fresh campaign, and by the action of Caracalla in making peace with the enemy and evacuating the forts that had been established in their country.

The action of Caracalla has confined within very narrow limits the prospect of finding dated material which might supply us by its distribution with a topographical setting for what the historical record tells us about the penetration of Caledonia, the cession of territory by the Britons, and the forts established in their country. As things stand, the only finds north of the isthmus which might be connected with the penetration of Caledonia at this time are a few native hoards, in Kinross, Fife, and Kincardine, in which the latest coins, marking the date of

¹ Dio, lxxvii, 13 ; lxxviii, 1.

² Dio, lxxvii, 13.

concealment, are issues of Severus. On the isthmus, the large number and fresh condition of the coins of Severus and his family included in the native hoard of *denarii* found at Falkirk in 1933 might be considered to testify to an activity of circulation due to the presence of Roman troops in the neighbourhood, and not entirely to trading relations supposed by Macdonald to have followed immediately upon the peace patched up by Caracalla.¹ On the Roman site on Croy Hill fragments have been found of a relief of Dolichenus of an official kind,² and in the Western provinces it is to the time of the Severi that the official military monuments of that cult mostly belong. On the same site a detachment of the Sixth Legion dedicated an altar to the Nymphs under a Fabius Liberalis³ (a centurion?), and a T. Fabius Liberalis, as prefect of the Cohors I Aquitanorum, dedicated at Stockstadt, on the German Limes, one of a group of altars to Dolichenus, which, so far as they are dated, belong to the reign of Caracalla.⁴

But while such slight and uncertain material would find a suitable place within the framework of a Severan occupation, the reason at

¹ Macdonald, *Numismatic Chronicle*, 5th Ser., xiv (1934), p. 29, *Proc. Soc. Ant. Scot.*, lxxviii (1933-4), p. 39. We are there reminded of 'an occasion when coins of Severus and his family were conveyed into southern Scotland by a channel that was not commercial . . . to purchase peace from the Maeatae'. But that was in 197, and more than two-thirds of the coins of Severus and his family in the hoard were minted after that year.

² Macdonald, *Proc. Soc. Ant. Scot.*, lxxvi (1931-2), pp. 268 ff., and *The Roman Wall in Scotland*, pp. 415-7. It is rather different with the altar to Dolichenus found on the site of the second-century fort at Burrens (*Eph. Epig.*, ix, 1229, *Proc. Soc. Ant. Scot.*, xxx (1895-6), p. 127). This is a small affair which seems to be of a purely private kind. It might indeed be taken to mean that the site where it was set up had by then ceased to be occupied by a fort.

³ Macdonald, *The Roman Wall in Scotland*, p. 423.

⁴ *Obergermanisch-Rätische Limes*, B, Bd. iii, Nr. 33, p. 95. According to Macdonald, who regards the identification of the Croy Hill Liberalis with the Stockstadt Liberalis as possible, the only reason why a date in the early third century has been attributed to the Stockstadt altar is that it is dedicated to Dolichenus. Actually, the case for the date is a little stronger than that, being supported by the circumstances in which the altar was discovered. It was found in a Dolichenum outside the fort along with four others dedicated to the god. Of these four two are dated, both in the reign of Caracalla; and a date in the early third century would suit also the remaining two, which were both dedicated by a prefect who gives Thenae, in Africa, as his place of origin.

present for supposing that there may have been a brief occupation of the isthmus at that date lies elsewhere—in the fact that a second restoration which has been noted in most of the excavated forts there and which seems to have no counterpart in the supporting forts to the south is difficult to explain as a continuation of the Antonine Wall-system, whereas it fits in readily enough with the account of Severus' brief occupation of enemy country given by Cassius Dio and supplemented by the coin-finds at Cramond. Nor does the structural evidence for this restoration include nothing to suggest an inference as to date. The much greater mass of the upper of two accumulations of soil and debris cleared out of the Great Ditch where this forms part of the defences of the fort of Rough Castle, presumably on the two occasions when the fort was restored, seems to show that the second of the two periods of abandonment preceding the restorations had been considerably longer than the first.¹ If that be the correct inference from the stratification, it seems to preclude an immediate restoration by Ulpius Marcellus, while it is consistent with a later restoration by Severus.

¹ For the details see Macdonald, *Proc Soc Ant Scot*, lxx (1924-5), pp 285-7 'Is it not self-evident,' he asks, 'that the successive accumulations represent two periods during which the Antonine fort lay waste after being temporarily abandoned under hostile pressure?' But he seems to have felt that the reply which his question invited would lead further than he was prepared to go, for he adds a warning that the greater thickness of the upper layer 'does not necessarily mean that the second period of desolation was longer than the first' What it 'unquestionably means', he concludes, is 'that the interval between the original construction of the fort and its first restoration was shorter than the time which had elapsed between the first restoration and the second' On his own view, each of these intervals included a period of occupation and a period of abandonment. It is to the periods of occupation that he attributes the two accumulations, for he argues to the relative length of these periods from the relative depth of the strata (*The Roman Wall in Scotland*, p 479) But accumulations so considerable that the value of the Ditch as an obstacle (and here it was part of the defences of the fort) 'must have been almost, if not altogether, destroyed' seem less likely to have been allowed to form during periods of occupation than to have formed during periods of abandonment. We are thus brought back to his question whether it is not 'self-evident that the successive accumulations represent two periods during which the Antonine fort lay waste' If it is, it would be equally self-evident that the second period of abandonment must have been more prolonged than the first

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